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UNIVERSITY OF ALBERTA

FACULTY PERCEPTIONS OF FINANCIAL CONSTRAINT IN PUBLIC COLLEGES AND TECHNICAL INSTITUTES

BY

STEVE PAWLAK

©

A THESIS
SUBMITTED TO THE FACULTY OF
GRADUATE STUDIES AND RESEARCH
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FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

DEPARTMENT OF EDUCATIONAL ADMINISTRATION

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SPRING, 1992

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FACULTY OF GRADUATE STUDIES AND RESEARCH

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To my wife, Gayle, and my children, whose continued assistance and support enabled me to complete this study.

ABSTRACT

The purpose of this study was to examine the perceptions and preferences of faculty members regarding financial constraint at their respective public colleges and technical institutes in Alberta, British Columbia, Manitoba and Saskatchewan.

The sample for this study consisted of 1,436 faculty members at 43 institutions. A specially designed 104-item questionnaire was administered in October, 1989, for the data collection. Statistical data were analyzed through one-way analysis of variance, t-tests and correlation analysis. Open-ended comments were subjected to content analysis.

The results of this study revealed that faculty members' interests centred on their professional work activities. Faculty perceived financial constraint as a significant problem, one that would continue into the foreseeable future. Overall, they viewed the impact of financial constraint at their institutions as detrimental. In particular, faculty considered its impact as negative on the quality of instruction, their morale, their socio-economic status, the achievement of their career aspirations, the efficient use of resources, the overall effectiveness of academic staff and the consideration of priorities. Persistent group differences in the perceived impact of financial constraint were identified on the basis of program area, province, full-time faculty positions lost by the institution or by the department in the last five years, fair financial treatment of the institution or of the department in the last five years and confidence in the president to effectively manage financial constraint.

With regard to the acceptability in principle of institutional responses to financial constraint, faculty preferred those measures that had the lowest impact on their professional work activities. Faculty considered as acceptable in principle "conservation measures," "program development" and "soliciting support groups." They considered as non-acceptable "facilities and equipment/ faculty support" and "salaries and positions." Persistent group differences in the acceptability in principle of measures for dealing with financial constraint were identified on the basis of program area and province.

The study concluded with recommendations for further research into the topic of faculty and financial constraint in public colleges and technical institutes. Also, some administrative implications were listed for institutions that may be faced with financial constraint. Two noteworthy implications were that institutions should consider selective cuts, instead of across-the-board reductions and faculty members should be involved in the development of institutional responses to financial constraint.

ACKNOWLEDGEMENTS

This study could not have been completed without the help and advice of many persons. The writer expresses his gratitude to those who have supported this study.

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Appreciation is also extended to the institutional presidents and the faculty associations who "opened their institutional doors" and assisted with the collection of data at their respective institutions.

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CHAPTER 1
INTRODUCTION TO THE STUDY

Financial constraint in institutions of higher education became apparent in the 1970s in both the United States and Canada. Slaughter and Skolnik (1987, p. 126) say financial decline was observed in the United States about 1972 and in Canada about 1977. In 1977, the contributions of the Canadian federal government were constrained with the passing of the Federal-Provincial Fiscal Arrangements and Established Programs Financing Act. Since that date real expenditures per students as a whole have declined. However, it was not until the early 1980s that many provinces began to feel significant constraints in higher education. In 1983/84, grants per student for Canada as a whole declined for the first time (Slaughter & Skolnik, 1987, p. 131).

Several researchers are predicting that institutions of higher education can expect to experience continued financial constraints in the next few years (Dennison, 1987b; Ell, 1988; Sanders, 1983; Skolnik, 1987). This study focuses on public colleges and institutes in Western Canada, where higher education is currently being financially constrained in each of Canada's four western provinces (Dennison, 1987b; Farquhar, 1987; Kristjanson, 1989; Panzeri, 1989).

The preponderance of financial constraint at institutions of higher education in Canada has focused on the universities. The focus of researchers and writers on the university sector is to be expected because most universities are research institutions, whereas two-year institutions conduct only a very limited amount of research. In Canada, the two most prolific writers about financial constraint have been Michael Skolnik at the Ontario Institute for Studies in Education (OISE) and John Dennison at the University of British Columbia. OISE, a member of Canada's largest university system, has experienced the effects of financial constraints caused by cutbacks that were distributed proportionately among all Ontario universities for over a decade through an enrollment-based funding formula (Skolnik, 1987, p. 155). The British Columbia universities experienced abrupt financial decline over the three year period 1983/84 to 1985/86 (Dennison, 1987b, p. 139). Skolnik and Dennison have recorded much of what we know about financial constraint in Canadian institutions of higher education.

This study focuses on faculty perceptions of financial constraint at public colleges and institutes, the majority of which are two-year institutions. Little is known about financial constraint in this sector of higher education in Canada. In the United States, two-year colleges were more severely constrained than four-year colleges or comprehensive universities during a period of declining enrollments and declining finances (Hayward, 1986, pp. 25-26; Zammuto, Whetten & Cameron, 1983, pp. 99-101).

This study focuses on faculty because of their importance in higher education. The academic division of colleges is the "operating core". Mintzberg (1979) expressed this notion when he said:

> The administrator cannot impose his will on the professionals of the operating core. Instead, he must rely on his informal power, and apply it subtly. Knowing that professionals want nothing more than to be left alone, the administrator moves carefully -- in incremental steps, each one hardly discernible. In this way, he may achieve over time changes that professionals would reject out of hand had they been proposed all at once. (p. 365)

However, during a period of rapid financial decline it may not be advisable to make only incremental changes. For this reason, it is helpful to know the range of measures faculty members consider acceptable for dealing with financial constraint.

Kerr and Gade (1987) reported a two year study undertaken in the United States to strengthen presidential leadership in higher education in that nation. They stated that "the biggest single long-range influence on presidencies ... has come from the faculty" (p. 32). Likewise, Kauffman (1984, p. 6) claims that the faculty is the core of the academic enterprise, and administration must be concerned with faculty morale, creativity, and renewal.

This study is based on two premises: (1) that financial constraint is a fact of life in Canadian colleges and (2) that the opinions of faculty are central to any institutional responses to this condition.

Purpose and Research Questions

The general purpose of this study is to identify the perceptions and preferences of faculty members with regard to financial constraint at their respective public colleges and institutes in Western Canada. This general purpose gives rise to the following research questions.

1. What are faculty members' perceptions of financial constraint at their respective institutions?

2. Does the perceived impact of financial constraint vary with selected personal and institutional factors?

3. What measures for dealing with financial constraint do faculty members consider acceptable?

4. Does the acceptability of measures for dealing with financial constraint vary with selected personal and institutional factors?

5. Is there a relationship between the perceived impact of financial constraint and the acceptability of measures for dealing with financial constraint?

6. To what extent has financial constraint actually occurred in the colleges and technical institutes between 1984 and 1989?

7. Is there a relationship between the perceived impact of financial constraint and the relative financial constraint experienced?

Significance of the Study

Within the context of the micropolitics of education, this study articulates the interests of faculty members relative to a significant system and institutional condition. It has the potential to reveal factors associated with different degrees and modes of compliance.

Also, it investigates the perceptions and preferences of faculty members in two-year institutions, whereas most attention has focused on management, and at the university level. A comparison can be made between the results of this study and a similar study completed by Ell (1988) of university faculty. There is practical value in knowing what institutional responses are likely to be acceptable to faculty during a period of financial constraint. This could help to reduce the adversarial climate that often occurs during a period of major adjustment. The findings of this study may be useful in devising appropriate strategies for dealing with financial constraint, in a climate of cooperation.

Delimitations and Limitations

The following delimitations apply to this study:

1. The study includes only full-time faculty members.

2. The study includes only public colleges and public technical institutes in the provinces of British Columbia, Alberta, Saskatchewan and Manitoba.

3. The study is further delimited by the time frame within which the data are collected. The data for determining actual financial constraints will be limited to a five year period commencing with the 1984-85 academic year.

The following limitations apply:

1. This study is limited insofar as the perceptions and preferences expressed may reflect the respondents' personal goals.

2. This study is also limited by the fact that financial constraint is itself a variable, and the phenomena associated with financial constraint tend to vary from institution to institution and from province to province.

Definitions

For this study, the following definitions will apply:

Faculty: institutional staff that are classified as faculty by the institution's collective agreement or by the public service contract under which the staff are employed. In addition to instructional staff, this may include such persons as counselors, department chairpersons and librarians.

Financial constraint: the condition of reducing institutional financial support in an overall climate of concern about financial problems.

Actual Financial Constraint: is measured as the difference in real dollars per student between 1984-85 and 1988-89.

Relative financial constraint: the percentage change in real dollars per student for the period 1984-85 to 1988-89, in comparison to the 1984-85 financial support. That is:

$$\begin{array}{l}\text{Relative}\\ \text{financial}\\ \text{constraint}\end{array} = \frac{[\text{Real }\$(1984\text{-}85)/\text{student}] - [\text{Real }\$(1988\text{-}89)/\text{student}]}{[\text{Real }\$(1984\text{-}85)/\text{student}]} \times 100$$

Conceptual Framework

The conceptual framework (Figure 1) is comprised of three main components: (1) faculty members; (2) perceptions of the impact of financial constraint; and (3) the acceptability of various measures for dealing with financial constraint. The unit of analysis in this study was the individual faculty member, who was identifiable by selected demographic characteristics. These characteristics are divided into personal demographic characteristics and institutional demographic characteristics. The personal charcteristics include the following: academic qualification, tenure status, employment status (continuing or sessional), nature of appointment (full-time or part-time), administrative position, length of employment with institution, age, sex, support of the mission of the institution by the respondent and confidence in the President. The institutional characteristics include the following: program area, sector, province, size of institution, faculty positions lost by the institution and the department, financial treatment of the institution and the department, accumulated surplus of operating budget and support of the mission of the institution by the President.

Figure 1 displays the relationships investigated in this study. The unidirectional arrows indicate that the characteristics of the respondents relate to their perceptions of the impact of financial constraint and also relate to their acceptability of measures intended to deal with financial constraint. The two-way arrow indicates that the perceptions of the impact of financial constraint, and the acceptability of measures to deal with it, are somehow related.

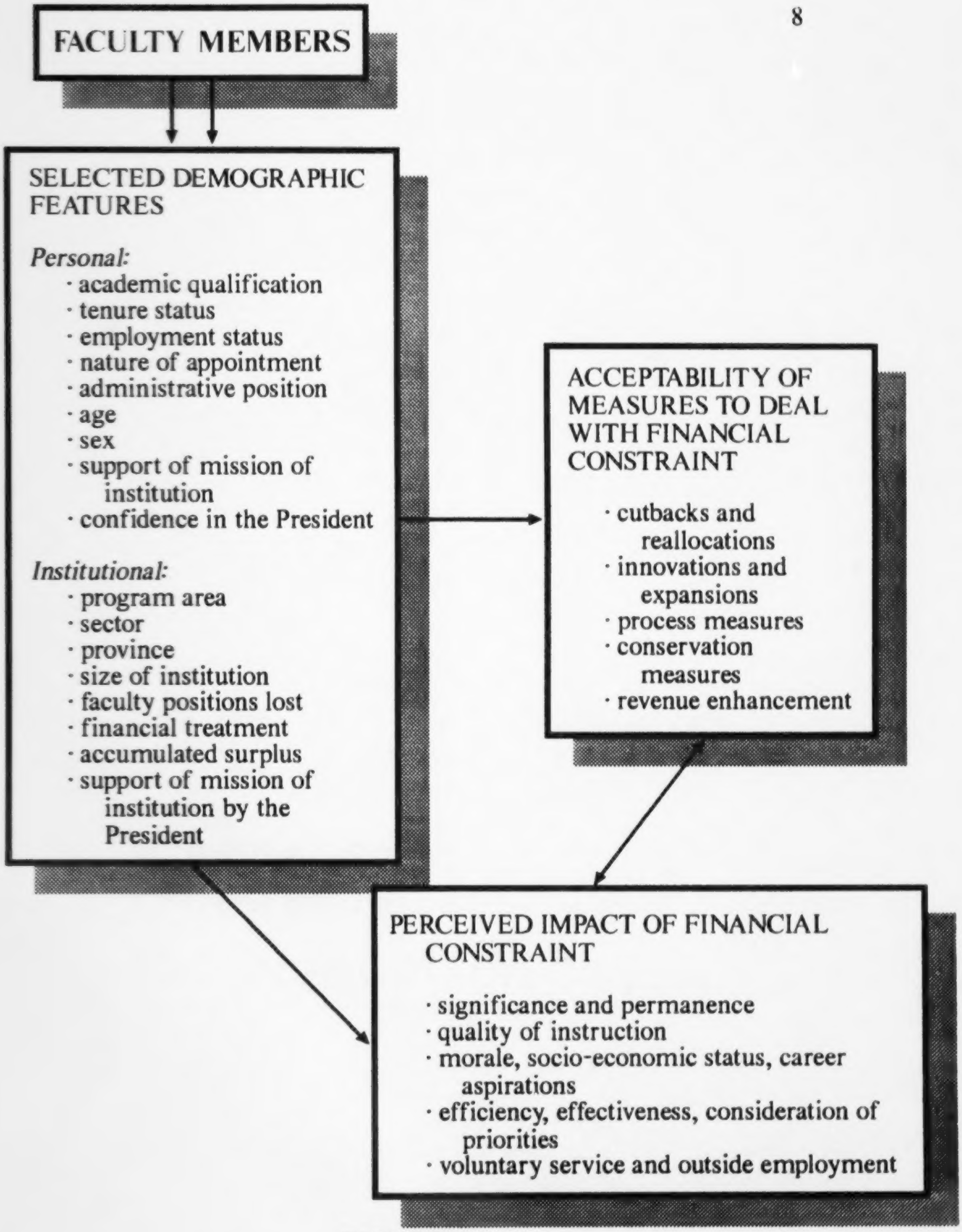
FACULTY MEMBERS
SELECTED DEMOGRAPHIC FEATURES
Personal:
· academic qualification
· tenure status
· employment status
· nature of appointment
· administrative position
· age
· sex
· support of mission of institution
· confidence in the President
Institutional:
· program area
· sector
· province
· size of institution
· faculty positions lost
· financial treatment
· accumulated surplus
· support of mission of institution by the President
ACCEPTABILITY OF MEASURES TO DEAL WITH FINANCIAL CONSTRAINT
· cutbacks and reallocations
· innovations and expansions
· process measures
· conservation measures
· revenue enhancement
PERCEIVED IMPACT OF FINANCIAL CONSTRAINT
· significance and permanence
· quality of instruction
· morale, socio-economic status, career aspirations
· efficiency, effectiveness, consideration of priorities
· voluntary service and outside employment

FIGURE 1

Conceptual Framework for the Study

Outline of the Thesis

Chapter I offers a general introduction to the study of faculty and financial constraint, specifies the research questions underlying the study, and gives an account of the study's significance as well as its delimitations, limitations, definitions and conceptual framework. Chapter II presents a review of literature related to the topic of financial constraint in higher education institutions. Chapter III details the study's design and methodology, the rates of return, and profile of the respondents. Chapters IV and V deal respectively with the analysis of quantitative and qualitative data. Chapter IV reports statistical findings related to the seven research questions, and Chapter V presents a content analysis of faculty's open-ended comments pertaining to financial constraint at public colleges and institutes. In Chapter VI a summary of the study is presented, conclusions are drawn and recommendations are put forward for research and practice. A bibliography and appendices follow the final chapter.

CHAPTER 2
REVIEW OF RELATED LITERATURE

Introduction

This literature review considers organizational decline in institutions of higher education under four sections. The first section, "Organizational Decline and Cutback Management," addresses the termination of public policies. The second section, "Higher Education and the Conditions of Decline," reviews enrollment decline and financial retrenchment in institutions of higher education in the United States. Section three, entitled "The Conditions of Decline in Canadian Higher Education," reviews retrenchment in Canadian post-secondary institutions. Finally, some of the "Responses to Decline of Institutions of Higher Education" in the past decade are noted.

Organizational Decline and Cutback Management

Scholars and researchers gave little attention to organizational decline and policy termination until the early 1970s (Bardach, 1976; Biller, 1976; Levine, 1978; Whetten, 1980). When resources are insufficient to afford new ventures without ending old ones, the strategies of facilitating termination take on major importance. Biller (1976) believes the difficulties in terminating a program are not due to the inherent characteristics of the program or the organization, but to the strategies we employ, and by our normal continuous investment of substantial resources to prevent cutbacks from occurring. We work extraordinarily hard to produce continuity, stability, and persistence -- all features that can be understood as ways of avoiding termination.

According to Biller (1976), we have depended upon large-scale permanent hierarchical organizations, called bureaucracies, to conduct public business. One of the principal strengths of a bureaucracy is to resist change and, especially, termination. The close intertwining of people and their positions in a bureaucracy, where it is known that the complexity of the large structure limits one's ability to predict the consequences of possible changes, makes for resistance to change. We have presumed the "normalcy of persistence and the exceptionality of termination" (p. 136). A bureaucracy is an organization designed for permanence and continuity. A market, on the other hand, is designed for impermanence and change. Biller (1976) proposes a matrix organization that provides a means by which highly stable bureaucracies add vigorous project-oriented organizational units, and stabilize this combination of permanent and temporary organizational forms by assuring that the decision rules appropriate to one are not applied to the other.

Bardach (1976) says the termination of public programs and policies is a political process. Termination seldom occurs but, when it does, it occurs with either a bang or a very long whimper. Proponents of policy termination fall into three categories, according to Bardach (1976, p. 126). The "oppositionists" dislike the policy at issue because they believe it is a bad policy. The "economizers" want to reallocate resources to another cause or to reduce government costs. The "reformers" are political actors who see the termination of one policy as a necessary precondition to the successful adoption and implementation of a substitute. Bardach (1976) gives five reasons why policy termination is seldom attempted. First, at the point of initiation, the policy is designed to endure into the indefinite future. Second, prudent politicians shy away from conflicts over termination which are often both unsuccessful and quite brutal. Third, political leaders are reluctant to admit past mistakes. Fourth, the potential reformer is often reluctant to damage the existing program apparatus without being sure that something better will actually materialize in its stead. Fifth, policy termination is rarely attempted because of the dearth of effective political incentives. Culturally, the political system rewards novelty and innovations. Structurally, the economic benefits are either too widely dispersed or too small to be a valuable political incentive (Bardach, 1976, pp. 128-129).

Levine (1978) said that we have not considered the management of declining public organizations because we have assumed that government organizations would continue to increase in size just like public revenues and expenditures. He argued that it is timely to investigate cutback management because our future will be dominated by resource scarcity.

Whetten (1980) agreed that organizational decline has been a neglected topic. Whetten says we have focused on growth since World War Two, and researchers have not been interested in organizational decline. The North American ideological bias is for innovation, growth and positive contributions such as new programs and new policy initiatives. Whetten (1980) also claimed it is appropriate to study organizational decline since we are approaching an era of diminishing resources.

Levine (1978, 1979) used the topic of cutback management to discuss organizational decline. Levine (1979, p. 180) asserts that there are four aspects of resource scarcity that compound the tough decisions that management must make. First, behavioural scientists have demonstrated that change is most easily accomplished when the people affected have something to gain, but under conditions of austerity the acceptance of change will be unlikely because the rewards required to gain cooperation and build consensus are unavailable. Second, public organizations are confronted with professional norms, civil service procedures, affirmative action commitments, and collective bargaining agreements which constrain the ability of management to target cuts. Third, organizational contraction produces some serious morale and job satisfaction problems which make it difficult to increase productivity to make up for the cuts.

Fourth, creativity diminishes, innovation and risk-taking decline, and the sense of commitment that comes from doing new things disappears because enjoyment is reduced by nearly everyone being forced into a position of having to do more with less.

Levine (1979, pp. 180-182) then states that a declining organization presents at least nine unique problems for its management, all of which he called "paradoxes." The first problem he called "The Paradox of Irreducible Wholes." This problem refers to the fact that an organization cannot be reduced piece-by-piece by simply reversing the sequence of activities and resources by which it was built. The second problem Levine called "The Management Science Paradox." This problem is caused by the way public organizations invest in and use their data systems and analytic capacity. When resources abound and administrators have analytic capacity, they do not need it; when resources are scarce, they do not have it and cannot use it because their analytic expertise has been reduced. The third problem, Levine labeled "The Free Exiter Problem,"and he defined free exiters as "people who take advantage of an organization's collective goods without contributing their share to achieving the organization's goals" (p. 180). The fourth problem confronting managers of declining organizations, according to Levine (1979), is what he called "The Tooth Fairy Syndrome." He says that in the initial stages of contractions few people are willing to believe that the talk of cuts is for real or that the cuts will be permanent. The fifth paradox is what Levine calls "The Participation Paradox." By encouraging participation by all affected parties, management also encourages protective behaviour by those that are likely to be hurt the most. "The Forgotten Deal Paradox" is the label given by Levine to the sixth problem, in which he says public sector managers resist multi-year bargaining because of a lack of continuity of managers in the organization. Hence, there is little faith in commitments that promise to restore or partially restore cuts at some future date. The seventh problem that managers face in a declining organization is what Levine (1979) called "The Productivity Paradox." Under times of austerity it is very difficult to find funds to invest in productivity improvement such as training and equipment expenses. The eighth problem is termed the "Mandates Without Money Dilemma." These dilemmas occur when legislative bodies and courts pass laws and issue court orders without providing funds to offset the additional expenses incurred by compliance. The ninth problem, "The Efficiency Paradox," is what Levine says is the most important and most troublesome because it is easier to cut inefficient and poorly managed organizations than those that are efficient and well run. Hence, when across-the-board cuts are made, efficient organizations are penalized more than their poorly performing peers. Levine also notes that there are few rewards, and often penalties, for conserving resources in public management, which encourages inefficiency.

Higher Education and the Conditions of Decline

The purpose of this section of the literature review is to provide evidence that American institutions of higher education have recently experienced and are experiencing conditions of decline, both financially and with regard to enrollments, and to discuss ways that were used by American institutions to deal with conditions of decline.

Trow (1988) said an important and distinctive characteristic of American higher education is the diversity of its sources of support. Taken in aggregate, American colleges and universities get support from federal, state and local governments, from private sources such as churches, business firms, foundations and individuals; from students, in the form of tuition and fees, residence living expenses, food services and health services; and from their own endowments, as well as from the sale of services to others. State and local governments provide a third of all support to higher education. Students provide another third, of which about 30 percent is federal aid to students. In total, the federal government contributes about 23% of higher education costs. Institutions contribute 15 percent through endowments and other sources and another six percent is provided by individuals, foundations, and private business firms (Trow, 1988, p. 19).

Trow (1988) asserted that because American institutions have attempted to serve the diverse groups that support higher education, these institutions have not been able to afford the luxury of high academic standards across all degree-granting institutions. However, this diversity of standards and functions has allowed higher education institutions to penetrate deeply and broadly into the life of American society.

Slaughter and Skolnik (1987) reviewed higher education in the United States during three "stages" beginning with the period 1957 to 1972, when that country's economy appeared strong, and higher education prospered, especially in the Northeastern and Midwest states. After 1965, higher education greatly expanded opportunities for previously excluded students. By the end of this period, higher education was on the verge of becoming a right rather than a privilege, as indicated by the initiation of student aid grants. During the period from 1972 to 1980, higher education was in "steady decline" according to Slaughter and Skolnik, although some regions were suffering serious declines, while others experienced great growth. During this period, states in the Northeast and Midwest began to suffer. Although these states had severe economic problems, federal government funding continued to be heavy, both in terms of research spending and student aid expenditures. This assisted the larger research universities much more than the locally funded community colleges. The third period, beginning with the Reagan administration in 1980, saw unevenly distributed retrenchment continue, with reductions in federal funding to higher education. An emerging political response to fiscal restraints seems to be to concentrate resources at research universities in high technology fields in hopes of stimulating private sector economic growth.

Blumenstyk (1989) reported that the public college systems in three northeastern states, New York, Massachusetts and Connecticut, faced budget deficits that would force them to lay off more than 2,000 faculty and staff members, cancel hundreds of courses and reduce enrollments. These states all made the same mistake of over-estimating their revenues from corporations and individuals. These states under-estimated the extent to which corporations and individuals would alter their financial dealings to avoid the higher taxes of the 1986 federal tax reform law.

Mortimer and Tierney (1979) addressed reduction, reallocation, and retrenchment as pertinent topics for institutions of higher education in the 1980s because of the anticipated enrollment decline and the cost-income squeeze. After examining the environmental conditions that affect colleges and universities in the United States, Mortimer and Tierney projected a national decline of 15% to 20% in the number of 18 year olds between 1980 and 1990. They expected this decline to vary greatly by region and to impact differentially on various institutions depending on their competitive edge. Changes in student preferences, which at that time seemed to be directed more towards "career-oriented" programs and away from the traditional liberal arts, would have a differential effect on individual institutions.

The "cost-income squeeze" faced by most institutions was seen as a major challenge facing administrators and faculty in the 1980s (Mortimer and Tierney, 1979). This was critical because there was little flexibility left in most institutional budgets due to previous financial retrenchment, declining private donations, and lower endowment revenues. The result of enrollment decline and the cost-income squeeze was foreseen to be reduction, reallocation and retrenchment. Focusing on expenditure control instead of revenue generation, Mortimer and Tierney (1979) projected the necessity for the following: standardization of retrenchment terminology to overcome ambiguous communications; improved faculty-administration interaction; and some hard financial decisions, including staff dismissals and program discontinuance. Such measures were intended to increase institutional flexibility. To be successful during a time of retrenchment, Mortimer & Tierney (1979) said that an institution must "strive to develop a consistent philosophy that synthesizes its strategy for the 1980s" (p. 54) and adopt institutional goals with an operational meaning. The institutional goals should include reducing the growth rate in faculty salaries, program discontinuance, and retrenchment.

Boyd (1983) said educators in the United States are confronted simultaneously with four kinds of decline: declining enrollments, declining economic-budgetary circumstances, declining public confidence in education, and a declining legitimacy of administrative authority. The overall effect of the context of decline, according to Boyd (1983), is a scramble for scarce resources, intensifying special interest group activity and the politicization of education. Boyd (1983, pp. 7-8) identified six conditions that make policy making and conflict management significantly different in decline than under growth conditions. First, resource allocation decisions become far more difficult. Second, participation is intensified as all organizational members feel a personal stake in the decisions to be made. Third, retrenchment decisions are complicated by considerations of equity and entitlement. Fourth, morale plummets in declining organizations. Fifth, organizations cannot cut back simply by reversing the sequence of developments by which they grew. Sixth, while growth can be managed on an *ad hoc* basis without grave peril, retrenchment requires systematic planning and analysis.

Whetten (1981) believes that retrenchment in education leads administrators to reflexively select the efficiency option as a response to decline. He postulated six efficiency reinforcing dynamics that are largely responsible for the pattern of conservative responses to retrenchment (pp. 83-89). First, the consequences of natural responses to stress in the lives of administrators tend to make them very conservative. One of the most common side-effects of organizational retrenchment experienced by administrators is personal stress. Administrators tend to favour non-productive, but anxiety-reducing, behaviours such as withdrawal, hostility, or aggression to minimize personal stress. Second, administrators try to use processes to solve problems during a period of scarcity that proved effective during a period of abundance. Whetten (1981) said this is particularly true of administrators in situations of rapid growth, highly successful organizations that operate within a very narrow conceptual framework. Third, the bureaucratic structure of educational organizations creates a bias against change. In an environment of scarcity, new initiatives are viewed as "zero-sum" decisions and, consequently, it is very difficult to obtain a consensus among committee members. Fourth, the absence of comparable data on organizational effectiveness leads educational administrators to place undue emphasis on efficiency data. Fifth, those most qualified to turn an organization around often see little incentive for making the effort and, not wanting to have their record marked by failure, leave the institution. Sixth, a crisis leads to the espousal of traditional values, and internal organizational variation is reduced by cutting back on recent innovations and by creating a conservative climate that makes it very difficult to get approval of new ideas.

After warning them about using a passive, efficiency-oriented response to retrenchment, Whetten (1981, p. 91) suggested that educational administrators may be compromising simultaneous efforts to increase effectiveness when they try to increase productivity in response to declining resources. These compromising efforts may occur because effectiveness and efficiency are not only independent, but are also often competing organizational objectives. Whetten (1981) concludes that

> the key to enhancing the adaptive potential of these organizations is utilizing the pressure of scarcity to spur innovation. Hence, the real challenge of retrenchment for educational administrators is to galvanize their faculty's attention on the emerging opportunities to redesign our educational institutions to match the conditions of the coming decades. (p. 92)

Ashar and Shapiro (1990) undertook a study on one campus to assess the suitability of the rational choice model in explaining retrenchment decisions. They used two decision models. The first, the rational choice model, suggests that data collected during a review process are functional and that there is a substantive use of them by administrators in decision making. The second decision model, the process model, suggests that the information gathered in the search process is not linked to decisions and that the information search activities are mainly ritualistic and symbolic. The research findings showed a systematic relationship between objective, evaluative data and policy decisions in time of financial stress. Allocation criteria that were set and on which explicit and comparative information was searched did guide the choice process. Ashar and Shapiro (1990) conclude that "retrenchment increases reliance on rational procedures and that during periods of stress, at least procedural rationality is maximized" (p. 137).

After noting how difficult and risky it is to attempt to terminate a public policy, Behn (1978, pp. 394-409) provided twelve political strategies intended to improve the probability of successfully achieving a public policy termination. First, do not float trial balloons, because opponents will be able to mobilize extensive opposition. Second, enlarge the policy's constituency and enlarge the political arena in which the policy's fate is debated so as to alter the balance of influence upon those who will make the termination/continuation decision. Third, focus attention on the policy's harm because termination is the only cure for a harmful policy. Fourth, take advantage of ideological shifts to demonstrate that a policy is harmful, because individual policies, such as the Free Trade Agreement, are good or bad depending upon the ideological framework from which they are viewed. Fifth, inhibit compromise because compromise will ensure a policy's continuation. Sixth, recruit an outsider as the terminator of a policy because a new leader may not feel compelled to justify an institution's past behaviour, and may intend to leave the organization in the near future. Seventh, termination is more likely to result from executive than from legislative action, because legislative bodies are designed to facilitate compromise. Eighth, when formal legislative action is required, do not appear to be usurping the authority of the legislative branch, because the issue of "who's boss?" may become more important than the policy. Ninth, accept short-term cost increases to gain long-term savings. Tenth, use some form of severance payment to buy out the beneficiaries of a policy that is to be terminated. Eleventh, when possible, use the adoption of a new policy to eliminate a current policy, so the focus is on the new and better initiatives in the new policy. Twelfth, it is important to distinguish between the policy and the organization that administers it, and to terminate only that part of a policy that must be abolished.

Keller (1983, pp. 12-25) projected six major shifts in higher education in the United States through the end of the century. First, the student clientele will change such that the student population will be older, include more blacks, Hispanics, and Asians, and part-time students. Second, the curriculum will expand to accommodate the different interests of the more diverse student body. Third, there will be an increase in competition between institutions of higher education because of the decreasing number of eligible students. Fourth, the rapid technological changes will increase costs and affect the libraries, computer capabilities, the cooperative arrangements between industry and universities, and extension services at institutions. Fifth, the faculty will become older, less rejuvenation of faculty will occur, more part-time faculty will be employed, and the emphasis will be on specialized research and publications and away from teaching. Sixth, there will be a tightening grip of outside control, and more intervention by the courts, the state officials, and the federal government.

Hauptman (1991, pp. 8-9) postulates that the 1990s probably will not be as good to higher education as the 1980s were, because of the current economic recession, long-term federal budgetary constraints, a decline in enrollment growth and the change in the financial position of many institutions. The impact of the recession will be to reduce state and local government for higher education. The continuing high federal deficit will likely constrain the funds available to institutions and to students. Increases in tuition and other costs of attendance are likely to constrain increases in enrollments and participation rates are probably approaching saturation for both traditional-age and older students. Compared to a decade ago, the financial position of many institutions has changed such that they will not be able to raise tuition fees as rapidly and they cannot expect as much revenue from their endowments.

Schaw (1989) warned that higher education facilities are at risk of serious deterioration because of insufficient funding to repair, renew and replace existing facilities. He said that higher education faces two basic issues in the area of capital renewal and replacement. The first is quantifying and funding the accumulated backlog of capital needs. The second is developing an on-going funding plan to ensure that backlogs do not accumulate in the future.

Anderson and Massy (1990) also predicted difficult times ahead for higher education. They said that in spite of the positive role that higher education can play in improving national productivity, the urgency of the deficit reduction will limit government funding for new programs and make it difficult even to sustain current ones. The contribution of higher education is only seen in the long-term view and the politician's view is relatively short-term. Anderson and Massy (1990, pp. 14-17) then provide some strategies for colleges and universities to deal with the negative effects of deficit reduction. The strategies related to current operations include: (1) avoid optimistic income forecasts, (2) avoid heavy forward commitments, (3) establish cost-containment programs to reduce the need for future tuition and overhead rate increases and (4) maintain or create budget flexibility. The strategies related to capital for facilities and equipment were: (5) develop detailed plans for sources and uses of equipment and stick to them, (6) minimize institutionwide capital costs, (7) fully integrate capital budgeting with financial forecasting of operating budgets and (8) use hedging techniques to minimize risks. The strategies to public image were: (9) use caution in generating unrelated business income, (10) do not abuse tax-exempt status and (11) avoid overly aggressive investment policies.

Zammuto, Whetten and Cameron (1983, pp. 100-101) used enrollment data from the Higher Education General Information Survey for the years 1975-76 to 1978-79 to study enrollment decline and institutional response at 2,965 higher education institutions. The institutions were classified under five major institutional categories: (a) major doctoral institutions, (b) comprehensive institutions, (c) general baccalaureate institutions, (d) specialized institutions, and (e) two-year institutions. Believing that patterns of decline experienced by an institution may provide some hints as to the continuity of the environmental changes encountered, the authors categorized the decline patterns on the basis of research by Zammuto (1982). Zammuto (1982) found three distinct patterns of decline among institutions of higher education. They were categorized as "gradual" decline (enrollment decline averaging 11.7% over a three year period), "saw-toothed" decline (alternating years of increasing and decreasing enrollments, with an average enrollment decline of 17.6% over three years) and "rapid" decline (enrollment decline averaging 29.7% over three years). Zammuto, Whetten and Cameron (1983) projected that "rapid" decline or "saw-toothed" decline is observed in institutions that had encountered some discontinuous changes in the environment. Gradually declining enrollments, on the other hand, would seem to indicate a continuity of change in the environment.

The results of the study by Zammuto, Whetten and Cameron (1980) showed that 946 (31.9%) of the 2,965 institutions experienced an average enrollment decline of more than 5% during the period 1975-76 to 1978-79. Based on the major institutional categories listed above, the 946 institutions with declining enrollments included 25 (2.6%) major doctoral institutions, 94 (9.9%) comprehensive institutions, 173 (18.3%) general baccalaureate institutions, 181 (19.2%) specialized institutions, and 473 (50.0%) two-year institutions. The majority of the declining institutions that were classified as major doctoral institutions, comprehensive institutions or general baccalaureate institutions were experiencing a "gradual" pattern of enrollment decline. By contrast, the specialized institutions and the two-year institutions experienced predominantly "saw-toothed" or "rapid" enrollment decline.

Blumenstyk (1991) said the economic recession has forced many states to turn thousands of students away from college. Public colleges have raised admission standards, set earlier deadlines or simply not provided enough course sections to meet student demand. The enrollment limits have been a consequence of the dire economic conditions plaguing states. Kaplan (1991) said that one option that institutions have not chosen, when faced with difficult fiscal realities, is to undermine or compromise the quality of instructional programs.

Enrollment management means that choices be made and that students with the best chance of success be admitted to the institution.

Behn (1983) said that during a time of crisis, such as is caused by declining enrollments, the quality of the management makes a difference between an institution that withers under the crisis and one that responds by taking advantage of the opportunities created. He then offered the following five distinct managerial opportunities that are created by declining enrollments: (1) the opportunity to rethink organizational strategy; (2) the opportunity to rethink the meaning and measure of performance; (3) the opportunity to increase managerial flexibility; (4) the opportunity to rethink the meaning of equity; and (5) the opportunity to develop new managerial styles. Behn (1983) concludes by saying "The task for the manager ... is to leverage the momentum created by the necessity of retrenchment to improve performance" (p. 118).

Decline in Canadian Higher Education

The purpose of this section is to provide indications of the existence of financial constraint in Canadian higher education during the past 15 years. Unlike the American institutions, enrollment decline has not been as much of a concern to Canadian institutions.

Slaughter and Skolnik (1987) observed many similarities between Canada and the United States with respect to the funding of higher education over the past three decades -- first, a long period of expansion extending into the seventies; a second period of stabilization, or slight decline, during which some provinces experienced great growth and a few others experienced decline; and a third period which began in the eighties of greater and more widespread funding decline. Slaughter and Skolnik (1987) noted four significant differences between the higher education systems in Canada and the United States which influence funding constraints. These differences are: (1) Canadian universities are predominantly publicly funded; (2) Canadian tuition fees are low by American standards; (3) the federal influence in post-secondary education is more restricted in Canada than in the United States; and (4) universities in Canada tend to be quite homogeneous with respect to mission and standards, compared to those in the United States.

Slaughter and Skolnik (1987) acknowledged a lot of variation between provinces, but believe that generally, the expansionary period in Canada was from 1962 to 1977. With the passing of the Federal-Provincial Fiscal Arrangements and Established Programs Financing Act in 1977, the contributions of the federal government were constrained, and real expenditures per student in Canada as a nation have declined since that date. Therefore, the period 1977 to 1983 saw real funding per student decline or level off in all provinces except the resource-rich provinces of Alberta and British Columbia. The third period began in

1983 when the federal government unilaterally imposed new limits on federal transfer payments to the provinces. This new restraint on federal funding added to the impact of stagnating provincial economies such that 1983-84 was the first time that the current dollar value of provincial operating grants per student declined for Canada as a whole. Slaughter and Skolnik (1987) predicted the rest of the eighties in Canada would be marked by financial constraints and confrontation between universities and governments, as proved to be the case.

Dennison and Gallagher (1986, pp. 81-86) provided a similar scenario for the development and funding of community colleges in Canada. They noted that the 1960s saw the establishment of new public colleges in many parts of Canada, and by the mid-1970s a nation-wide network of public colleges was becoming evident. Favoured by a widespread public commitment to universal accessibility to higher education and buoyant economic conditions, the public colleges quickly gained an accepted place in Canadian post-secondary education. Dennison and Gallagher (1986, pp. 69-80) said the distinguishing characteristics of these new institutions were (1) curriculum comprehensiveness; (2) student heterogeneity; (3) open admissions; (4) a strong orientation to student services; (5) operational flexibility; (6) geographic decentralization; (7) responsiveness to government; (8) an emphasis on teaching and learning, as opposed to research; (9) a strong community orientation; and (10) their public character. These characteristics made Canada's community colleges very dependent upon, and responsive to, community politics, provincial governments, and the state of the provincial economy.

Dennison and Gallagher (1986) noted that by the mid-1970s most provincial governments were proposing program rationalization, establishing coordinating mechanisms, and funding the colleges based on the government's ability to pay, not on the institution's request. By the mid-1980s, the colleges were experiencing the same degree of funding constraints that the universities had earlier.

In speaking to the Second Conference on Higher Education, Dennison (1987a) began his address with the following statement:

> . . . Canada's college systems were born and nurtured within that remarkable golden age of educational development which blossomed in the late fifties and withered in the middle seventies. Few social organizations have blossomed so rapidly, been so fueled by idealism, and have grown old so quickly. (p. 131)

Dennison (1987a) indicated that the rapid aging process of Canada's colleges was due to the economic retrenchment that began in the mid-1970s, when provincial governments reacted to the general decline of the national economy.

In discussing funding retrenchment, Bercuson, Bothwell and Granatstein (1984) noted that the funding decline was gradual and that universities met the problem initially with "invisible" funding (repairs not made, old buildings and equipment not replaced, and part-time faculty employed). With the introduction of enrollment-based funding, the underfunded institutions increased class sizes and eased admission requirements to maximize their grants. Bercuson, Bothwell and Granatstein (1984) described the results of financial retrenchment at the Ontario universities in the following way:

> Very simply, the universities are in a financial mess, and the problems are simply horrendous. One of the first things that must be done is to find some way of changing the present basis of funding. No longer can it be tied to enrollments in any way, for the experience with that kind of system has been disastrous.... There must be an end to the open accessibility that has ruined the universities. Incompetent students, students who should never have gone to university, have nearly destroyed the system. Standards once again must be applied.... Anything is better than the present situation. (p. 28)

Skolnik and Rowen (1984, p. 13) claimed that no substantial research had been done to provide a full analysis of the reasons for decline in higher education -- beyond the unwillingness of governments to pay. They suggested the following contributing factors: economic recession or stagnation, competing demands for public revenue from other social service areas, declining job prospects for university graduates, and public disenchantment with higher education. Symons and Page (1984, p. 78) mentioned large enrollment increases and rising costs of operation as contributing factors.

Ell (1988) studied the perceptions of faculty concerning retrenchment at the universities in Canada's four western provinces. His main conclusions were that (1) faculty members consider financial constraint at their universities a grave and likely enduring condition; (2) faculty's acceptance of measures to deal with financial constraint at their universities increases as the impact of those measures falls further from faculty members' professional work activities; and (3) faculty's preferences for resolving the matter of financial constraint include their own participation in the generation of institutional responses.

Ell (1988) reported that

> Faculty members reject most strongly measures that would reduce their compensation, threaten tenure, or increase their average teaching workload. Faculty also reject strongly measures that would imperil their ability to conduct research or to provide instruction, measures that would diminish academic travel allowances, academic computing funds, library resources, and instructional supplies. Faculty's central concerns in the matter of financial constraint are closely related to their professional work activities. (p. 224)

Stewart (1986, pp. 281-296) addressed the sources of funding for higher education. He noted that most Canadians believed that education is largely a collective good that benefits society as a whole. Stewart supported the idea of publicly financed higher education, noting that private industry support, and first-class private undergraduate colleges, are not part of the tradition of education in Canada. He did observe that there is generalized support for an increase in tuition fees, although raising tuition fees would lower accessibility.

Skolnik (1987) reviewed the politics and economics of retrenchment in the Ontario university system. He observed that Ontario has spread its cuts in university funding over a longer time period than most other Canadian provinces and has avoided the quick, sharp cuts that have been common elsewhere on this continent. Skolnik (1987) noted that although the cumulative impact of annual cuts has been substantial, the universities have failed to provide any persuasive evidence about quality deterioration. According to Skolnik, the Bovey Commission, established in 1984, recommended: (1) modifications of the funding formula which would allow research universities to become more research-intensive without penalty to their operating grants; (2) that quality be given a clear priority over accessibility; and (3) that tuition fees be raised substantially. Skolnik closed his article by complimenting the Ontario Government on its approach to retrenchment: "I am led to conclude that the retrenchment policy of the Ontario Government over the past decade has not been so bad, and probably a whole lot better than the alternatives" (p. 168).

Farquhar (1987), in addressing the Students' Association at the University of Winnipeg, said that although inflation had increased costs by 30% in the previous four years, the grant per student had only increased by 20%. He further observed that university operating grants had increased by only 40% while the Manitoba provincial revenues had increased by 50%. Farquhar attributed financial retrenchment in Manitoba's universities to the provincial government viewing education as a lower priority than health, community services, and child welfare. He also believed that the electorate was like minded.

The financial constraints felt by the post-secondary institutions in Alberta and claims of inequitable funding prompted the Minister of Advanced Education to authorize an equity study in 1986. Dupré (1987) was commissioned to conduct the study to:

> 1. assess whether the distribution of operating grants among public board-governed post-secondary educational institutions is fair and equitable, given the current program responsibilities of these institutions;
> 2. measure the extent of such inequities as may be identified and propose suitable remedies; and
> 3. propose whatever measures may be deemed relevant to ensuring the maintenance of a fair and equitable distribution of operating grants over time. (p. iv)

Dupré (1987) found that the Department of Advanced Education had equitably allocated millions of dollars of operating funds, on a program by program basis, over a 12 year period. The significant exception to the equitable distribution of these operating funds is noted in the following quotation:

> ... the Government, in determining the level of operating grants it accords to the Northern Alberta Institute of Technology, the Southern Alberta Institute of Technology and the Alberta College of Art over the next three to five years, should take account of a historical overfunding of NAIT in relation to SAIT of $550,000,

> and of a historical underfunding of SAIT and the Alberta College of Art in relation to NAIT which amounts to $1,760,000 and $140,000 respectively. (pp. 120-121)

This section has reviewed some of the literature on financial constraints in Canadian post-secondary education. Most of the literature refers to the university sector of post-secondary education and the information is predominantly from Ontario, which has the largest university system in Canada.

Responses to Decline

Berger (1983) said that institutions respond to declining enrollments with either "substantive" retrenchment policies or "process" retrenchment policies. Substantive retrenchment policies focus on raising revenues, cutting costs, or some combination of the two. Process retrenchment policies focus on the management tasks of planning for and obtaining acceptance of the institution's decisions. This includes preparing budgets, projecting enrollments, and analyzing personnel and facility requirements. Berger (1983) stated that the most important consequences of retrenchment policies concern the issues of efficiency and equity and the trade-offs between the two issues. Efficiency refers to cutting employees and units to maximize long-term survival of the organization as a whole, irrespective of the distribution of these cuts (Levine, 1978). Equity, in contrast, means the distribution of cuts across the entire organization, irrespective of the impact of the cuts on the long-term capacity of the organization (Levine, 1978).

Perry (1988) said that during a period of decline, an understanding of (1) which pockets of demand are declining, (2) whether demand is likely to revitalize, and (3) how rapidly demand will decline for different market niches is critical to formulating appropriate strategic responses. He suggests that laying off employees during a short term recession is very costly because of the rehiring costs, the retraining costs and the inefficiencies that result from many new employees. Perry (1988) claimed the key to choosing a least-cost human resources strategy is to lower human resources costs without permanently losing firm-specific skills. When the effect of the decline results in less work to be done, Perry (1988) suggests a job-sharing program, unpaid leaves of absence and the nine-day fortnight. When the decline is such that the same amount of work still needs to be done, but less money is available to pay people to do it, he suggests firms reduce their financial leverage by structuring debt, by temporarily reducing employee benefits or wages, such as having employees give up some of their paid time off, or by tying a substantial portion of employee salaries to company performance. Perry notes that when pay cuts are reasonable and used as a short-term solution to conditions in a declining industry, they offer significant relief and seldom lead to an exodus of key personnel.

Hardy (1990) reviewed the processes and procedures used by several companies in Canada and Great Britain to implement retrenchment strategies. She says there are a number of management tasks that can be carried out to reduce the chances of resistance to retrenchment strategies and enhance the likelihood of successful retrenchment. (1) Awareness of the importance of the social and political implications of retrenchment as part of the larger turnaround strategy must be created among the senior level of management. (2) Alternative methods of reducing costs should be carefully considered, to allow for a more flexible approach to downsizing. (3) Involve employee representatives in at least part of the decision-making process. (4) Ensure that the process is perceived to be handled fairly by using some sort of selection process, especially if dismissals are involved. Three common selection criteria are seniority, required skills and performance. (5) Accommodate interest group concerns by choosing a strategy that includes support measures, such as severance pay and help in finding new jobs. (6) Disclose as much information as you can. (7) Provide an understanding of why retrenchment is occurring by demonstrating legitimate reasons for retrenchment. (8) Managers have to choose between accepting responsibility for the current situation or directing the blame to some other legitimate scapegoat.

One of the largest studies on the responses to financial restraint was conducted by Mortimer, Bagshaw and Caruso (1985) over a three year period from 1982 to 1985. They studied 318 of the 1,371 four-year colleges and universities in the United States. Mortimer, Bagshaw and Caruso found that institutions responded in the following ways to institutional restraint. (1) Use of part-time faculty was by far the most prevalent staffing alternative to traditional tenure-track staffing. (2) Three-fourths of the institutions reallocated funds or positions within the institution. (3) About half reduced or closed programs. (4) To reduce staff, early retirement incentives were offered by 37% of the institutions. (5) Most institutions allowed staff to be reduced by natural attrition.

Among Mortimer, Bagshaw and Caruso's (1985) findings were the following: (1) Both academic and non-academic areas were affected. (2) Budget cuts and reallocation put great pressure on existing formulas and traditional systems of resource allocation. (3) It was difficult to persuade those in low priority areas that they should be low priorities. (4) Decremental budgets were very difficult to implement over time. (5) Administrative reorganizations and program closures did not save significant dollars in the short run, unless positions were eliminated. (6) Faculty committees worked best when they were not asked to discuss individual programs or people, but methods and criteria.

Hayward (1986) analyzed the effects of Proposition 13 on California's community colleges eight years after it was approved in 1978.

He claimed that Proposition 13 totally changed the funding situation which he characterized as inadequate and uncertain. The colleges were no longer able to undertake all their traditional functions. The governance of the college shifted from the local trustees to the state legislature. However, Hayward (1986) noted:

> Both local trustees and the State Board of Governors lack key elements of the capacity to govern. As a consequence, key decisions affecting the colleges are often made by the state legislature -- that is, in the political arena. This has further weakened local autonomy and has clouded the issue of where leadership resides. (p. 28)

Hayward (1986) recommended soundly based information systems, comprehensive planning, and a participatory decision-making process to overcome these adverse effects on California's community colleges.

Hardy (1985) studied four publicly funded organizations, including McGill University in Montreal, which responded to financial cutbacks by resisting them. The components of a successful resistance strategy included identifying the relevant interest groups, building effective coalitions, and creating legitimacy for the organization and its mission. Hardy (1985) said the pitfalls of resisting cutbacks are increased uncertainty and the need to compromise. Resisting cutbacks may protect the institution in the longer term, future government policies may be affected, it may buy some time for the organization to find other sources of funding thus reducing the severity of the cutbacks, and managers and administrators who fight cuts will be viewed as having a commitment to the organization (pp. 547-548).

In their study of 2,965 institutions of higher education for the years 1975-1979, Zammuto, Whetten and Cameron (1983) found that institutional response to decline depended on the type of institution (major doctoral, comprehensive, general baccalaureate, specialized, or two-year) and the pattern of the decline (gradual, saw-toothed, or rapid). The major doctoral and comprehensive universities that experienced a gradual erosion of enrollments responded by making a slight internal realignment of resources. The general baccalaureate institutions increased the pool of potential students, in addition to realigning internal resources. The specialized institutions or the two-year institutions were more likely to experience saw-toothed decline or rapid decline. In such cases, the institutions responded by taking relatively drastic measures such as reconstructing educational programs, merging with other institutions, or changing from private status to public status.

Levine (1979) said that when dealing with financial cuts, managers had to choose between resisting them or limiting their impact on the organization. Management must choose between a "deep gouge" strategy or a "small decrement" strategy. Levine contended that the "deep gouge" strategy tends to make the most management sense, but the "small decrement" strategy may make the most political sense. When the strategy is chosen, the next decision involves sharing the pain across the organization or targeting the cuts in specific areas. Levine (1979) stated that sharing the pain of cuts by allocating them across-the-board to all units may help to maintain morale and build a good team spirit in the organization, but it is not responsible management, because not every unit contributes equally to the goals of the organization. Perhaps the most difficult decision to make in the cutback process involves the trade-off between efficiency and equity (Levine, 1979). The most dependent parts of our population -- minorities, the poor, the handicapped, and the aged -- are often the most costly to serve and tend to suffer the most during a cut-back.

Dennison (1987b) reported that the University of British Columbia responded to a third consecutive year of financial retrenchment in 1985-86 by discontinuing six programs, terminating 12 faculty members, 9 of whom were in tenured positions, and reducing the budgets of core programs by $3.4 million. He stated that similar cutbacks occurred at the University of Victoria and Simon Fraser University. As a result, Dennison (1987b) said the institutions needed to reassess the concept of academic tenure, identify quality measures that are applicable on an institution-wide basis, establish an academic plan for the institution, establish a working relationship between the institution and the provincial government, and formulate ways to restore the morale of the faculty and the confidence of the students.

This section has considered some of the responses to enrollment decline and financial retrenchment that have occurred in institutions of higher education in the United States and Canada in the past decade.

The Ell (1988) Study

This study is modeled after the Ell (1988) study. Ell used a sample of 457 full-time faculty members at 11 universities in Alberta, British Columbia, Manitoba and Saskatchewan. A specially constructed 100-item survey questionnaire was administered by Ell in January - March, 1986, for the collection of data.

The Ell (1988) study considered the questions of how faculty perceived the impact of financial constraint at their respective universities, whether the perceived impact of financial constraint varied with specific demographic characteristics, what measures faculty members considered acceptable-in-principle for dealing with financial constraint and whether there is a relationship between the perceived impact and the acceptability in principle for dealing with financial constraint.

Ell (1988) offered faculty members 68 measures of dealing with financial constraint. A factor analysis of the measures resulted in ten factors loading 59 items with a factor loading greater than 0.40. These ten factors accounted for 47.5% of the total variance. The ten factors in the Ell (1988) study were: reduction in programs, reduction in administrative support, reduction in academic support, reduction in remuneration, lobbying for legitimacy and additional funds, development and expansion of programs, student fees and services, involvement of faculty members, voluntary alternatives to dismissal and conservation measures.

Ell (1988) found that faculty members' vital interests focused on basic elements of their professional work activity. Faculty perceived financial constraint as a significant problem that would persist in the immediate future. Overall, they viewed the impact of financial constraint at their universities as negative. In particular, they considered its impact as detrimental to the quality of their instruction, their morale, their socio-economic status, and the achievement of their career aspirations.

With regard to the acceptability in principle of institutional responses to financial constraint, Ell (1988) found that faculty exhibited a preference for measures that had the least effect on their professional work activities. Faculty considered as acceptable in principle "lobbying for legitimacy and additional funds," "involvement of faculty members," "conservation measures," "voluntary alternatives to dismissal," and "development and expansion of programs." They considered unacceptable "reduction in academic support" and "reduction in remuneration."

Summary

The majority of the published research is related to universities and to institutions in the United States. On the Canadian scene, the majority of research has focused on the university sector in Ontario and, to a lesser extent, in British Columbia. This may be the natural outcome of the two most prolific researchers of decline in higher education in Canada being faculty members at a university in Ontario and at a university in British Columbia. However, it may also be due to the fact that the Ontario university sector, the largest in Canada, has undergone the longest period of continuous financial retrenchment of any Canadian university system, and the British Columbia post-secondary system has recently undergone the most dramatic and rapid financial decline.

There is very little information about retrenchment at the public colleges in Canada. The colleges may have been able to respond more easily to financial retrenchment because they were still in an early phase of development, had shorter stay students, and fewer tenured faculty. However, it is also possible that the retrenchment experiences at the public colleges have just not been published.

This literature review clearly shows a wide variation both in the

United States and in Canada in the severity of decline experienced by the institutions of higher education. The effects of decline were felt in the United States institutions about five years before they were experienced in Canada. In both countries, the effects of decline began to be felt over a five to seven year period, in various parts of the country. In the United States, the larger research-oriented and comprehensive universities were affected less dramatically than the smaller, specialized institutions and the two-year institutions. In Canada, there is insufficient evidence to compare the post-secondary sectors. In Canada, since all post-secondary institutions depend almost entirely upon public financing, the differential effects of decline between sectors would not likely be as pronounced as in the United States.

CHAPTER 3
DESIGN AND METHODOLOGY

This chapter presents details of this study's design and methodology, as well as reporting the rate of return under the various demographic categories.

Study Design

This section of the chapter describes this study's design and methodology.

Characteristics of the Study

First, the design is characterized as survey research. Data for the study were collected by means of a survey questionnaire constructed specifically for this study (Appendix A). Second, the design is descriptive in that it provides an account of faculty members' perceptions and preferences. Third, the study is also characterized as hypothesis-testing insofar as it tested the following general hypotheses: (1) that faculty members' perceptions of the effects of financial constraint vary by selected demographic characteristics; (2) that faculty members' preferences for measures for dealing with financial constraint vary by selected demographic characteristics; (3) that faculty members' perceptions of the effects of financial constraint are related to their views on the acceptability of measures for dealing with financial constraint; and

(4) that faculty members' perceptions and preferences are related to the severity of relative financial constraint in their respective colleges and technical institutes.

Development of Questionnaire

A questionnaire for this study was developed based on the questionnaire used by Ell (1988). The questionnaire for this study consists of four parts. Part I contains 20 questions pertaining to selected personal and institutional characteristics. These characteristics are as follows: program area, highest academic qualification, tenure status, employment status (continuing or sessional), nature of appointment (full-time or part-time), province, sector (college or institute), size of institution, length of employment with institution, age, sex, faculty positions lost by the institution, faculty positions lost by the department, financial treatment of the institution, financial treatment of the department, accumulated surplus in the operating budget, respondent's support of the mission of the institution, president's support of the mission of the institution, and confidence in the president to effectively manage financial constraint.

Part II of the questionnaire consists of 19 statements pertaining to the perceived impact of financial constraint at the respondents' respective institutions. Section A consists of four statements regarding the significance and permanence of financial constraint at the respondents' respective institutions. A five-point scale is used ranging from "strongly disagree" to "strongly agree".

Section B consists of seven statements pertaining to the global impact of financial constraint on various aspects of the activities at the respondents' respective institutions, namely, quality of instruction, morale, socio-economic status, achievement of career aspirations, efficient use of resources, overall effectiveness of staff, and the consideration of priorities. In this section, the five point scale ranges from "very negative" to "very positive."

Section C consists of four statements pertaining to the personal impact of financial constraint on four activities of the respondents at their respective institutions, namely, quality of instruction, morale, socio-economic status, and achievement of career aspirations. The five-point scale used in this section ranges from "very negative" to "very positive."

Section D consists of four statements pertaining to the impact of financial constraint on various aspects of the respondents' activities at their respective institutions, namely, voluntary service activities and outside employment. In this section, the five-point scale ranges from "decrease greatly" to "increase greatly."

A particular feature of Part II are seven pairs of parallel statements, which make possible a comparison of faculty members' perceptions of the impact of financial constraint upon themselves individually and upon faculty members generally.

Part III of the questionnaire consists of 65 statements regarding various measures for dealing with financial constraint. Respondents were asked to indicate the extent to which they found the given means of dealing with financial constraint acceptable. In Part III, the five-point scale ranges from "very unacceptable" to "very acceptable."

Finally, Part IV of the questionnaire provided an opportunity to the respondents to make any comments they wished regarding financial constraint.

Pilot-testing of the Questionnaire

A previous version of the questionnaire administered in this study was pilot-tested by 13 graduate students in Adult Education and Educational Administration at the University of Alberta.

Several changes were made to the questionnaire as a result of the pilot-testing. Questions about political preference and faculty association or union membership were deleted. Part II was divided into four sections, instead of three, to provide better clarification between faculty members' perceptions of the impact of financial constraint upon themselves individually and upon faculty members generally. Clarity of expression was improved as a result of suggestions that were offered. The number of items was reduced from 106 to 104, with the two deletions noted above.

The time required to complete the questionnaire in this pilot-test varied from 15 to 35 minutes, with an average time of 23 minutes.

Reliability and Validity

The reliability of the survey instrument was examined by using Guttman Split-Half coefficients (Table 3.1). Despite the relatively low coefficient for Part II-A (0.26), which contains only four items, the coefficients for Part II in total (0.80) and Part III (0.87) indicate that the survey instrument exhibited reasonable reliability in this study as a measure of perceived impact of financial constraint at public colleges and technical institutes and as a measure of the acceptability in principle of measures for dealing with financial constraint.

TABLE 3.1
Guttman Split-Half Reliability Coefficients of the Survey Instrument

Part of the Instrument	Coefficient
Part II (total)	0.80
Part II-A	0.26
Part II-B	0.82
Part II-C	0.82
Part II-D	0.78
Part III	0.87

Content validity was established through the pilot-test, at which time respondents were told the purpose of the survey instrument and were asked to question any item as well as the wording and the sequence, and to offer suggestions for additions, deletions and revisions.

The classifications of the qualitative data are based on the items used to measure the perceived impact of financial constraint and on the factors which indicated the acceptability of measures for dealing with financial constraint.

Data Collection

The data for this study were collected using the following procedures.

A college president in each province, who was known to the researcher, was contacted by telephone about the proposed study. The purpose of the study was briefly discussed and help was requested to obtain permission to distribute the questionnaire in each public college and technical institute in that province. A follow-up letter was sent to each of these college presidents.

In Alberta, a college president presented the request to distribute the questionnaires at a meeting of the Council of Presidents of the Colleges and Technical Institutes in June, 1989. The researcher was asked to contact the President of each institution on an individual basis. A letter of support for the study was also obtained from the Alberta College-Institute Faculties Association.

In British Columbia, the researcher made a presentation to the B.C.

Council of Principals in June, 1989. The Council recommended that the researcher contact each principal individually to request support to administer the survey instrument.

In Saskatchewan, a president of one of the regional colleges made the request to distribute the questionnaires at a meeting of the Council of Principals. The researcher contacted the President's Office of the Saskatchewan Institute of Applied Science and Technology (SIAST) directly. After reviewing the questionnaire, the Executive Committee of SIAST agreed to distribute the questionnaire at each of the four campuses of SIAST.

In Manitoba, the Assistant Deputy Minister of the Department of Education agreed to distribute the survey instrument to the faculty through the Personnel office of the province's three institutions.

All institutions, with the exception of one technical institute in Alberta and two colleges in British Columbia, agreed to distribute the questionnaire. The questionnaires were distributed either through the President's office, the office of the academic vice-president, the personnel office, or the faculty association office at each institution. The researcher mailed the questionnaire directly to faculty members at the three institutions that did not distribute the survey instruments. The names of the faculty members for these three institutions were obtained from the academic calendar of each institution.

After a contact person was established at each institution, the number of full-time faculty members was determined for each institution. In mid-September, 1989, sufficient questionnaires were sent to each institution to survey one-third of the full-time faculty members. In addition to the questionnaires, each institutional contact person was provided with a letter of instructions pertaining to the distribution of the questionnaires (Appendix B).

Each questionnaire was accompanied by a covering letter and a stamped, self-addressed enveloped for the return of the completed questionnaire. This letter, dated October 2, 1989, and signed by the researcher, explained the purpose of the questionnaire and acknowledged the cooperation of the institution, where this had been obtained. The letter also contained assurances that responses to the questionnaire would remain anonymous. No data were identified with individual respondents or individual institutions. A copy of the covering letter can be found in Appendix C.

Three weeks after the initial letters, a follow-up letter, dated October 23, 1989, was sent to all potential respondents through the institutional contact people at 40 institutions and directly to the faculty members at the three other institutions. Those respondents who had returned a questionnaire were thanked and the other potential respondents were encouraged to complete and return the questionnaire. A copy of the follow-up letter is shown in Appendix D.

On December 4, 1989, a letter of appreciation was sent to all the contact people at the institutions. This letter also requested the contact person to inform the researcher of the number of copies of the questionnaire that had been distributed at that institution. A copy of the letter of appreciation can be found in Appendix E.

A total of 2,813 questionnaires were sent by mail to the contact people at 40 institutions. In addition, 308 questionnaires were mailed directly to faculty members at three more institutions during the week of October 2, 1989. These 308 questionnaires were mailed directly to faculty members at one Alberta technical institute (233 questionnaires) and two B.C. colleges (75 questionnaires). A total of 3,129 questionnaires were sent to institutions or faculty members. A total of 2,672 questionnaires were actually distributed to faculty members because a surplus of 449 questionnaires had been sent to the institutions. On a provincial basis, 947 questionnaires were distributed to faculty members at 11 colleges and three technical institutes in Alberta, 1,096 questionnaires were distributed to faculty members at 15 colleges and two technical institutes in British Columbia, 213 questionnaires were distributed to faculty members at three colleges in Manitoba, and 416 questionnaires were distributed to faculty members at eight colleges and one technical institute in Saskatchewan.

On March 5, 1990, a copy of the survey results was sent to the contact person at each institution that distributed the questionnaires, to fulfill a commitment made when the institutions were asked to distribute the questionnaires. The survey results were also sent to the presidents of the three institutions where the questionnaires were mailed directly to the faculty members. Appendix F contains a copy of the covering letter that accompanied the survey results.

Sample

The population for this survey consisted of all (approximately 8,000) full-time faculty members at public colleges and technical institutes in Alberta, British Columbia, Manitoba, and Saskatchewan. In Alberta, the eleven public colleges were the Alberta College of Art, Fairview College, Grande Prairie Regional College, Grant MacEwan Community College, Keyano College, Lakeland College, Lethbridge Community College, Medicine Hat College, Mount Royal College, Olds College and Red Deer College. The technical institutes in Alberta that were included in the survey were the Northern Alberta Institute of Technology, the Southern Alberta Institute of Technology and the Westerra Institute of Technology.

The 15 public colleges in British Columbia that were included in the survey were Camosun College, Capilano College, Cariboo College, Douglas College, East Kootenay Community College, Fraser Valley

College, Kwantlen College, Malaspina College, the College of New Caledonia, North Island College, Northern Lights College, Northwest Community College, Okanagan College, Selkirk College, and Vancouver Community College. The British Columbia Institute of Technology and the Emily Carr College of Art and Design were the two technical institutes in British Columbia included in the survey.

Manitoba's three public colleges were included in the survey. These were Assiniboine Community College, Keewatin Community College, and Red River Community College.

The eight regional colleges and the technical institute in Saskatchewan were also part of this survey. The eight regional colleges were Carlton Trail Regional College, Cumberland Regional College, Cypress Hills Regional College, Northlands Career College, North West Regional College, Parkland Regional College, Prairie West Regional College, and South East Regional College. Saskatchewan's technical institute is the Saskatchewan Institute of Applied Science and Technology.

A proportional sample of full-time faculty members, stratified by institution, was selected from the above population. The institutional contact person was asked to arbitrarily select one of the first three names on a list of full-time faculty members and thereafter choose every third name on the list to participate in the survey.

Data Analysis

Statistical data collected in this study were analyzed by means of the programs in the *Statistical Package for the Social Sciences* (Nie, Hull, Jenkins, Steinbrenner, & Bent, 1975). A variety of statistical procedures were used. Means and standard deviations were calculated to address the research questions regarding faculty perceptions of the impact of financial constraint and regarding the acceptability of measures for dealing with financial constraint.

For questions pertaining to the identification of group differences, one-way analysis of variance and *t* tests were used.

Means and standard deviations were also calculated to answer the research question regarding the acceptability in principle of measures for dealing with financial constraint. To assist in exploring group differences, an orthogonal (varimax) factor analysis was performed in order to identify generic factors. This resulted in the reduction of 65 items dealing with financial constraint into 11 factors. Factor scores based on these 11 factors were then used to calculate group differences by means of one-way analysis of variance and *t* tests.

Factor scores were also used to calculate Pearson correlations to respond to the research question regarding the relationship between the perceived impact of financial constraint and the acceptability in principle of measures for dealing with financial constraint.

The institutional operating expenditures per student, indexed to 1980-81 dollars, were calculated by province for the five-year period 1984-85 to 1988-89. These expenditures were then compared to the means of the responses to item 21 on the questionnaire, by province, to determine if there was any relationship between faculty members' perceptions of financial constraint, and the changes in institutional operating expenditures per student in the past five years.

Qualitative data were obtained by means of open-ended comments in the returned questionnaire. Open-ended comments came mostly in Part IV of the questionnaire, in response to an invitation for comments. Additional comments were written in response to the invitation in Part II of the questionnaire and from unsolicited comments that were written in the margins of the returned questionnaires. Comments from all three sources were treated identically for the purpose of the content analysis.

Initially, the open-ended comments were transferred from the completed questionnaires to file cards. Then the comments were classified by category and compiled under the appropriate heading. From Part II of the questionnaire, the categories pertaining to the perceived impact of financial constraint were "financial constraint as a significant problem," "permanence of financial constraint," "quality of instruction," "faculty morale," "socio-economic status of faculty," "career aspirations of faculty," "efficient use of resources," "overall effectiveness of academic staff," "consideration of priorities," "voluntary service activities" and "outside employment". The categories concerning the acceptability of measures for dealing with financial constraint were based on the factor analysis of items in Part III of the questionnaire. Eleven categories were used for the content analysis of Part III.

There were 743 (or 51.7%) of the 1,436 respondents to the questionnaire who provided some written comments. Therefore, the comments should not be generalized to the entire sample of respondents and cannot be considered representative of the population with regard to the perceived impact of financial constraint nor with regard to the acceptability of measures for dealing with financial constraint.

Ethical Considerations

This study adhered to the ethical guidelines established by the University of Alberta General Faculties Council and the Research Ethics Review Policies and Procedures of the Department of Educational Administration. All the potential participants were invited to take part in this study on a voluntary basis. Every effort was made to ensure that individual participants remained anonymous.

Rate of Return

Of the total of 2,672 questionnaires that were distributed to faculty members, 1,436 were returned and usable for an overall return rate of

53.7%. By sector, the rate of return was 57.5% for the colleges and 47.7% for the technical institutes. Table 3.2 provides the rate of return for the college and institute sector. By province, the rate of return was highest for Alberta with 58.1%, and lowest in British Columbia with 49.8%. Table 3.3 reports the rate of return for each province. By each sector in each province, the rate of return was highest for the Saskatchewan colleges with 64.3% and lowest for the British Columbia institutes with 27.1%. Table 3.4 shows the rate of return for each sector of each province.

Profile of the Respondents

The characteristics of the respondents are presented in Tables 3.5 to 3.16. By program area, career programs comprised, by far, the largest single component of the sample, followed by university transfer, adult basic education/adult upgrading and apprenticeship. Table 3.5 reports the frequency and percentage frequency distributions of respondents by program area.

By highest academic qualification, the largest component of the sample, 34.2%, identified themselves as holding a Bachelor's degree, while 30.2% reported holding a Master's degree. More than twice as many faculty members reported their highest academic qualification was a Diploma, 17.9%, as compared to a Doctorate, 7.8%. Table 3.6 reports the frequency and percentage frequency distributions of respondents by

TABLE 3.2

Rate of Return Classified by College or Institute Sector

SECTOR	Number of Questionnaires			
	Sent to Institution	Distributed	Returned	% Returned
Colleges	1,961	1,648	948	57.5
Institutes	1,160	1,024	488	47.7
Total Sample	**3,121**	**2,672**	**1,436**	**53.7**

TABLE 3.3
Rate of Return Classified by Province

PROVINCE	Number of Questionnaires			
	Sent to Institution	Distributed	Returned	% Returned
Alberta	1,014	947	550	58.1
British Columbia	1,374	1,096	546	49.8
Manitoba	243	213	108	50.7
Saskatchewan	490	416	232	55.8
Total Sample	**3,121**	**2,672**	**1,436**	53.7

TABLE 3.4

Rate of Return Classified by Sector by Province

COLLEGE OR INSTITUTE SECTOR	Number of Questionnaires			
	Sent to Institution	Distributed	Returned	% Returned
Alberta Colleges	541	483	307	63.6
Alberta Institutes	473	464	243	52.4
B.C. Colleges	1,087	882	488	55.3
B.C. Institutes	287	214	58	27.1
Manitoba Colleges	243	213	108	50.7
Saskatchewan Colleges	90	70	45	64.3
Saskatchewan Institutes	400	346	187	54.0
Total Sample	**3,121**	**2,672**	**1,436**	53.7

TABLE 3.5
Frequency and Percentage Frequency Distributions of Respondents Classified by Program Area

PROGRAM AREA	f	% f
Adult Basic Education/ Adult Upgrading	217	15.3
Apprenticeship	154	10.9
Career Programs	682	48.0
University Transfer	231	16.3
Other	135	9.5
TOTALS	**1,419**	**100.0**

TABLE 3.6
Frequency and Percentage Frequency Distributions of Respondents Classified by Highest Academic Qualification

HIGHEST ACADEMIC QUALIFICATION	f	% f
Doctorate	111	7.8
Master's Degree	432	30.2
Bachelor's Degree	489	34.2
Diploma (two years or more)	256	17.9
Other	141	9.9
TOTALS	**1,429**	**100.0**

highest academic qualification.

In the survey, 81.3% of the respondents reported themselves as a tenured/permanent appointment, while 18.7% reported themselves as a non-tenured/conditional appointment. Table 3.7 reports the frequency and percentage frequency distributions of respondents by status of position.

For non-tenured faculty, 72.7% indicated that they had continuing appointments while 27.3% reported having a sessional appointment. Table 3.8 reports the frequency and percentage frequency distributions by type of appointment for non-tenured faculty. Since the total number of respondents in Table 3.8, 411, is greater than the number of respondents who reported having a non-tenured position in Table 3.7, it is quite likely that many tenured/permanent faculty members also responded to this question.

Although the questionnaires were distributed only to faculty members perceived by the institutional contact person to be full-time appointments, 4.0% of the respondents perceived themselves to be part-time faculty members, as shown in Table 3.9.

By administrative status, 76.6% reported that they did not currently hold an administrative position. Table 3.10 reports the frequency and percentage frequency distributions of respondents by administrative status.

Of the 1,436 respondents, 38.3% were from Alberta, 38.0% were

TABLE 3.7
Frequency and Percentage Frequency Distributions of Respondents Classified by Status of Position

STATUS OF POSITION	f	% f
Tenured/Permanent Appointment	1,165	81.3
Non-tenured/Conditional Appointment	268	18.7
TOTALS	**1,433**	**100.0**

TABLE 3.8
Frequency and Percentage Frequency Distributions of Respondents Classified by Continuing or Sessional Appointment for Non-Tenured Faculty

TYPE OF NON-TENURED APP'T	f	% f
Continuing	299	72.7
Sessional	112	27.3
TOTALS	**411**	**100.0**

TABLE 3.9
Frequency and Percentage Frequency Distributions of Respondents Classified by Full-time Or Part-time Appointment

APPOINTMENT STATUS	f	% f
Full-time	1,369	96.0
Part-time	57	4.0
TOTALS	**1,426**	**100.0**

TABLE 3.10
Frequency and Percentage Frequency Distributions of Respondents Classified by Administrative Status

ADMINISTRATIVE STATUS	f	% f
No	1,096	76.6
Yes	335	23.4
TOTALS	**1,431**	**100.0**

from British Columbia, 7.5% were from Manitoba, and 16.2% were from Saskatchewan. Table 3.11 reports the frequency and percentage frequency distributions of respondents by province.

Of the 1,436 respondents, 66.0% were from the college sector and 34.0% were from the technical institute sector, as reported in Table 3.12.

By size of institution, as determined by the number of full-time equivalent students, the greatest number of respondents were from institutions with 5,000 to 9,999 students (27.9%) and fewer than 1,500 students (26.6%), while only 6.5% of the respondents were from an institution of 10,000 or more students. Table 3.13 reports the frequency and percentage frequency distributions of respondents by size of institution.

By years employed at the institution, the greatest number of respondents, 37.1%, reported being employed by their current institutions for 10 years to 19 years and no respondents reported being at their current institutions for 30 years or more. Table 3.14 provides the frequency and percentage frequency distributions of respondents by years employed at the institutions.

By age, the greatest number of respondents, 46.1%, were 40-49 years old, 2.1% were under 30 years and 2.4% were 60 years or over. Table 3.15 displays the frequency and percentage frequency distributions of respondents by age.

TABLE 3.11
Frequency and Percentage Frequency Distributions of Respondents Classified by Province

PROVINCE	f	% f
Alberta	550	38.3
British Columbia	546	38.0
Manitoba	108	7.5
Saskatchewan	232	16.2
TOTALS	**1,436**	**100.0**

TABLE 3.12
Frequency and Percentage Frequency Distributions of Respondents Classified by College or Institute Sector

SECTOR	f	% f
College	948	66.0
Technical Institute	488	34.0
TOTALS	**1,436**	**100.0**

TABLE 3.13
Frequency and Percentage Frequency Distributions of Respondents Classified by Size of Institution

NUMBER OF FTE* STUDENTS AT INSTITUTION	f	% f
Fewer than 1,500	345	26.6
1,500 to 2,999	235	18.1
3,000 to 4,999	271	20.9
5,000 to 9,999	363	27.9
10,000 or more	85	6.5
TOTALS	**1,299**	**100.0**

*FTE - Full-time Equivalent

TABLE 3.14
Frequency and Percentage Frequency Distributions of Respondents Classified by Years Employed at The Institution

YEARS EMPLOYED AT INSTITUTION	f	% f
Less than 5 years	361	25.1
5 years to 9 years	384	26.7
10 years to 19 years	532	37.1
20 years to 29 years	159	11.1
30 years or more	0	0.0
TOTALS	**1,436**	**100.0**

TABLE 3.15
Frequency and Percentage Frequency Distributions of Respondents Classified by Age

AGE	f	% f
Under 30 years	30	2.1
30 - 39 years	409	28.5
40 - 49 years	661	46.1
50 - 59 years	301	21.0
60 years and over	34	2.4
TOTALS	**1,435**	**100.0**

TABLE 3.16
Frequency and Percentage Frequency Distributions of Respondents Classified by Sex

SEX	f	% f
Female	497	34.7
Male	934	65.3
TOTALS	**1,431**	**100.0**

By sex, 34.7% of the respondents were female and 65.3% were male, as reported in Table 3.16.

Faculty Perceptions of Institutional Circumstances

Faculty perceptions of institutional circumstances are provided in Table 3.17. On an institutional basis, 59.4% of the respondents reported that their institution had lost some full-time faculty positions in the last five years as a result of financial constraint. In response to this question, only 16.1% of the respondents perceived that their institution had not lost any full-time faculty positions in the last five years due to financial constraint.

On a departmental basis, 34.3% of the respondents reported that their department had lost some full-time faculty positions, while 56.2% of the respondents reported their department had not lost any full-time faculty positions in the last five years as a result of financial constraint.

On an institutional basis, 70.2% of the respondents perceive that their institution has not been fairly treated, financially, in the past five years.

On a departmental basis, 65.3% of the respondents perceive that their department has not been fairly treated, financially, in the past five years.

In the survey, 84.6% of the respondents perceive that their

TABLE 3.17

Perceptions of Institutional Circumstances

	ITEM	No		Yes		Don't Know	
		f	% f	f	% f	f	% f
13.	Has your institution lost any full-time faculty positions in the last five years as a result of financial constraint?	230	16.1	851	59.4	351	24.5
14.	Has your department lost any full-time faculty positions in the last five years as a result of financial constraint?	798	56.2	487	34.3	134	9.4
15.	Do you believe your institution has been fairly treated, financially, in the past five years?	966	70.2	411	29.8	-	-
16.	Do you believe your department has been fairly treated, financially, in the past five years?	911	65.3	485	34.7	-	-
17.	Do you believe your institution currently has a substantial accumulated surplus in its operating budget?	1,172	84.6	213	15.4	-	-

institution does not currently have a substantial accumulated surplus in its operating budget.

Faculty Perceptions of Commitment

Faculty perceptions of commitment were measured on a five-point scale on which 1 = "strongly disagree" and 5 = "strongly agree." Table 3.18 reports faculty perceptions of commitment.

In the survey, 80.9% of the respondents reported that they "agree" or "strongly agree" with the mission of their institution, while only 6.2% of the respondents reported that they "disagree" or "strongly disagree" with the mission of their institution.

The large majority of respondents (72.2%) reported that they "agree" or "strongly agree" that the President of their institution supports the mission of their institution, while only 7.6% of the respondents reported that they "disagree" or "strongly disagree" that the President of their institution supports the mission of their institution.

The survey results indicated that 43.2% of the respondents "agree" or "strongly agree" that they have confidence in the President of their institution to effectively manage financial constraint while 33.8% are "neutral/uncertain" and 23.0% "disagree" or "strongly disagree" that they have confidence in the President of their institution to effectively manage financial constraint.

TABLE 3.18

Perceptions of Commitment

	ITEM	SD		D		N/U		A		SA	
		f	% f	f	% f	f	% f	f	% f	f	% f
18.	I support the mission of my institution.	37	2.6	51	3.6	183	12.9	725	51.0	425	29.9
19.	The President of my institution supports the mission of my institution.	46	3.2	62	4.4	286	20.2	636	44.9	387	27.3
20.	I have confidence in the President of my institution to effectively manage financial constraint.	123	8.6	206	14.4	483	33.8	471	32.9	147	10.3

SD = strongly disagree
D = disagree
N/U = neutral/uncertain
A = Agree
SA = strongly agree

Summary

The study's design was that of survey research. Data were collected by means of a four-part survey instrument that was developed based on a questionnaire used by Ell (1988). After pilot-testing, the questionnaire was administered in October, 1989 to one-third of the full-time faculty members of the public colleges and technical institutes in Alberta, British Columbia, Manitoba and Saskatchewan. The population was approximately 8,000 full-time faculty members at 43 different institutions. An overall return rate of 53.7% was obtained from 1,436 usable questionnaires that were returned. The profile of the respondents was obtained as were faculty perceptions of institutional circumstances and faculty perceptions of commitment. Quantitative data were analyzed to provide means and standard deviations. In addition, a variety of statistical procedures was used to analyze the data, including one-way analysis of variance, *t* tests, factor analysis, and Pearson correlation coefficients. On a province-by-province basis, the change in the institutional operating expenditures per student was calculated over a five-year period as a measure of financial constraint. The open-ended comments were subjected to a content analysis.

CHAPTER IV
QUANTITATIVE FINDINGS

This chapter reports statistical results related to the study's seven research questions.

The Perceived Impact of Financial Constraint

Table 4.1 summarizes how respondents perceived the significance and the impact of financial constraint at their respective institutions. On the five-point scale on which 1 = "strongly disagree" and 5 = "strongly agree," item 21 scored the highest mean at 4.21. Items 22 and 23 recorded means of 4.13 and 3.86 respectively. Item 24, an item paired with item 23 as a natural converse, registered a mean of 2.18. On the five-point scale on which 1 = "very negative" and 5 = "very positive," item 26 scored the lowest mean at 1.84, whereas item 29 recorded a maximum mean of 2.60, and the remaining items (25, 27, 28, 30, 31, 32, 33, 34, 35) ranged between these extreme values. Finally, on the five-point scale on which 1 = "decrease greatly" and 5 = "increase greatly," item 36 had the low mean of 2.62, and item 38 registered the high mean of 3.51.

Respondents considered financial constraint as a significant problem at their respective institutions, a problem that would probably last for at least another three years (items 21, 22 and 23). Respondents did not perceive that government would probably increase the funding of

TABLE 4.1
FACULTY PERCEPTIONS OF FINANCIAL CONSTRAINT

Part II, SECTION A: Indication of Significance of Financial Constraint

ITEM	MEAN	SD	N
21. Faculty generally perceive financial constraint at my institution as a significant problem.	4.21	0.85	1,438
22. I view financial constraint at my institution as a significant problem.	4.13	0.95	1,438
23. The situation of financial constraint at my institution will probably last for at least another three years.	3.86	0.99	1,422
24. The government will probably increase the funding of my institution next year by more than the rate of inflation.	2.18	1.05	1,428

In this section, the scale is as follows:

1 = strongly disagree
2 = disagree
3 = neutral/uncertain
4 = agree
5 = strongly agree.

TABLE 4.1 (Continued)

FACULTY PERCEPTIONS OF FINANCIAL CONSTRAINT

Part II, SECTION B: General Impact of Financial Constraint

ITEM	MEAN	SD	N
25. The impact of financial constraint at my institution on the quality of instruction is generally __________	2.18	0.76	1,426
26. The impact of financial constraint at my institution on faculty morale is generally __________	1.84	0.79	1,433
27. The impact of financial constraint at my institution on the socio-economic status of faculty is generally __________	2.18	0.76	1,428
28. The impact of financial constraint at my institution on the achievement of faculty career aspirations is generally __________	2.29	0.76	1,427
29. The impact of financial constraint at my institution on the efficient use of resources is generally __________	2.60	0.96	1,424
30. The impact of financial constraint at my institution on the overall effectiveness of academic staff is generally __________	2.33	0.75	1,430
31. The impact of financial constraint at my institution on the consideration of priorities is generally __________	2.38	0.93	1,419

In this section, the scale is as follows:
1 = very negative; 2 = negative; 3 = neutral/uncertain; 4 = positive; 5 = very positive

TABLE 4.1 (Continued)
FACULTY PERCEPTIONS OF FINANCIAL CONSTRAINT

Part II, SECTION C: Personal Impact of Financial Constraint

ITEM	MEAN	SD	N
32. The impact of financial constraint at my institution on the quality of instruction that I am able to provide is ________	2.44	0.74	1,428
33. The impact of financial constraint at my institution on my morale is ________	2.13	0.80	1,435
34. The impact of financial constraint at my institution on my socio-economic status is ________	2.23	0.80	1,434
35. The impact of financial constraint at my institution on the achievement of my career aspirations is ________	2.42	0.82	1,435

In this section, the scale is as follows:

1 = very negative
2 = negative
3 = neutral/uncertain
4 = positive
5 = very positive

TABLE 4.1 (Concluded)

FACULTY PERCEPTIONS OF FINANCIAL CONSTRAINT

Part II, SECTION D: Impact of Financial Constraint on Outside Activities

ITEM	MEAN	SD	N
36. The impact of financial constraint at my institution is generally to __________ voluntary service activities.	2.62	0.88	1,407
37. The impact of financial constraint at my institution is to __________ my voluntary service activities.	2.67	0.88	1,410
38. The impact of financial constraint on faculty at my institution is generally to __________ their outside employment.	3.51	0.70	1,369
39. The impact of financial constraint at my institution is to __________ my outside employment.	3.39	0.69	1,394

In this section, the scale is as follows:

1 = decrease greatly
2 = decrease
3 = have no effect on
4 = increase
5 = increase greatly

their institutions next year by more than the rate of inflation (item 24). Respondents perceived that the impact of financial constraint was negative on the quality of instruction (item 25), their morale (item 26), their socio-economic status (item 27), the achievement of their career aspirations (item 28), the efficient use of resources (item 29), the overall effectiveness of academic staff (item 30) and the consideration of priorities (item 31). Respondents also perceived that the impact of financial constraint on them personally was negative in terms of their quality of instruction (item 32), their morale (item 33), their socio-economic status (item 34) and the achievement of their career aspirations (item 35). In addition, respondents perceived that the impact of financial constraint was to decrease their voluntary service activities (items 36 and 37) and increase their outside employment (items 38 and 39). Overall, respondents viewed the impact of financial constraint at their institutions as negative.

Group Differences in Perceptions of Financial Constraint

This section presents findings related to group differences in the perceived impact of financial constraint.

Responses by Program Area

Four categories were created to analyze responses by program area: (1) adult basic education/adult upgrading; (2) apprenticeship; (3) career programs, and (4) university transfer. The "Other" category was omitted from the analysis because it was not specific to a particular program area.

Table 4.2 reports the significant differences identified in the one-way analysis of variance of the perceived impact of financial constraint classified by program area. The level of significance was set at the 0.05 level for the analysis of variance, and the level of significance was set at the 0.10 level for the Scheffe procedure to identify distinct pairs of means. Of the 19 variables measuring the perceived impact of financial constraint, 16 variables were identified as having significant differences.

Respondents from apprenticeship programs and career programs agreed more strongly that financial constraint will last at least another three years at their institution than did respondents from university transfer programs. Respondents from career programs also agreed more strongly that financial constraint will last at least another three years at their institution than did respondents from adult basic education/academic upgrading programs. Respondents from adult basic education/academic upgrading and career programs disagreed more strongly that government will probably increase the funding of their institution next year by more than the rate of inflation than did respondents from university transfer programs. Respondents from university transfer programs reported a significantly more negative impact on the quality of instruction, faculty morale, the efficient use of resources, and the overall effectiveness of

TABLE 4.2
PERCEIVED IMPACT OF FINANCIAL CONSTRAINT BY PROGRAM AREA

ITEM	MEANS						Intergroup Differences
	Overall	G1	G2	G3	G4	F Prob.	
SECTION A							
23. F.C. will last three more years.	3.85	3.70	3.88	4.00	3.56	0.00	2>4, 3>4, 3>1
24. Gov't will increase funding by more than inflation next year.	2.19	2.08	2.28	2.12	2.43	0.00	4>1, 4>3
SECTION B							
25. Impact of F.C. on quality of instruction.	2.19	2.23	2.34	2.22	1.97	0.00	3>4, 1>4, 2>4
26. Impact of F.C. on faculty morale.	1.85	1.92	1.93	1.87	1.70	0.01	3>4, 1>4, 2>4
27. Impact of F.C. on socio-economic status.	2.17	2.31	2.21	2.17	2.02	0.00	3>4, 1>4
28. Impact of F.C. on faculty career aspirations.	2.29	2.33	2.42	2.29	2.17	0.01	2>4
29. Impact of F.C. on efficient use of resources.	2.60	2.61	2.88	2.62	2.36	0.00	1>4, 3>4, 2>4, 2>1, 2>3
30. Impact of F.C. on effectiveness of academic staff.	2.32	2.36	2.42	2.34	2.16	0.00	3>4, 1>4, 2>4
31. Impact of F.C. on consideration of priorities.	2.39	2.37	2.57	2.42	2.21	0.00	3>4, 2>4

TABLE 4.2 (Concluded)

PERCEIVED IMPACT OF FINANCIAL CONSTRAINT BY PROGRAM AREA

ITEM	MEANS						Intergroup Differences
	Overall	G1	G2	G3	G4	F Prob.	
SECTION C							
32. Impact of F.C. on my quality of instruction.	2.45	2.49	2.59	2.45	2.29	0.00	3>4, 1>4, 2>4
33. Impact of F.C. on my morale.	2.16	2.24	2.24	2.16	2.02	0.02	1>4, 2>4
34. Impact of F.C. on my socio-economic status.	2.24	2.33	2.33	2.23	2.10	0.01	1>4, 2>4
SECTION D							
36. Impact of F.C. on voluntary activities.	2.62	2.78	2.72	2.64	2.36	0.00	3>4, 2>4, 1>4
37. Impact of F.C. on my voluntary activities.	2.66	2.77	2.71	2.68	2.46	0.00	3>4, 2>4, 1>4
38. Impact of F.C. on outside employment.	3.51	3.48	3.50	3.56	3.41	0.04	3>4
39. Impact of F.C. on my outside employment.	3.39	3.29	3.50	3.44	3.26	0.00	3>4, 2>4, 3>1, 2>1

F.C. = Financial Constraint

G1 = Adult Basic Education/Academic Upgrading; G2 = Apprenticeship; G3 = Career Programs; G4 = University Transfer

In Section A, the scale is as follows: 1 = strongly disagree; 2 = disagree; 3 = neutral/uncertain; 4 = agree; 5 = strongly agree.

In Sections B and C, the scale is as follows: 1 = very negative; 2 = negative; 3 = neutral/uncertain; 4 = positive; 5 = very positive.

In Section D, the scale is as follows: 1 = decrease greatly; 2 = decrease; 3 = have no effect on; 4 = increase; 5 = increase greatly.

academic staff at their institutions than did respondents from adult basic education/academic upgrading, apprenticeship and career programs. Respondents from university transfer programs reported a significantly more negative impact on the socio-economic status of faculty at their institutions than did respondents from adult basic education/academic upgrading and career programs. Respondents from university transfer programs reported a significantly more negative impact on the achievement of faculty career aspirations than did respondents from apprenticeship programs. Respondents from adult basic education/academic upgrading and career programs reported a significantly more negative impact of financial constraint on the efficient use of resources than did respondents from apprenticeship programs. Respondents from university transfer programs reported a significantly more negative impact on the consideration of priorities than did respondents from apprenticeship and career programs.

In terms of how respondents perceived that financial constraint individually affected them, respondents from university transfer programs reported a significantly more negative impact on their individual quality of instruction, their individual morale and their individual socio-economic status than did respondents from adult basic education/academic upgrading and apprenticeship programs. Respondents from university transfer programs also reported a significantly more negative impact on their individual quality of instruction than did respondents from career programs. Respondents from university transfer programs reported a significantly greater decrease of voluntary service activities at their institution, generally and individually, than did respondents from adult basic education/academic upgrading, apprenticeship and career programs. Respondents from career programs reported a significantly greater increase in outside employment generally at their institution than did respondents from university transfer programs. Respondents from apprenticeship and career programs reported a significantly greater increase in their individual outside employment than did respondents from adult basic education/academic upgrading and university transfer programs.

Overall, respondents from university transfer programs were much more negative about the effects of financial constraint upon themselves and their institution than were respondents from adult basic education/academic upgrading, apprenticeship and career programs.

Responses by Highest Academic Qualification

Table 4.3 reports the significant differences identified in the one-way analysis of variance of the perceived impact of financial constraint classified by highest academic qualifications. Data from four categories were used to analyze the responses by highest academic qualification: (1) Doctorate; (2) Master's degree; (3) Bachelor's degree and (4) diploma (two

TABLE 4.3

PERCEIVED IMPACT OF FINANCIAL CONSTRAINT BY HIGHEST ACADEMIC QUALIFICATION

	MEANS						
ITEM	Overall	G1	G2	G3	G4	F Prob.	Intergroup Differences
SECTION A							
23. F.C. will last 3 more years.	3.86	3.72	3.75	3.98	3.88	0.00	3›2
24. Gov't will increase funding by more than inflation next year.	2.19	2.35	2.27	2.03	2.26	0.00	4›3, 2›3, 1›3
SECTION B							
25. Impact of F.C. on quality of instruction.	2.16	2.07	2.07	2.23	2.21	0.01	3›2
27. Impact of F.C. on socio-economic status.	2.16	2.07	2.07	2.19	2.29	0.00	4›1, 4›2
SECTION C							
34. Impact of F.C. on my socio-economic status.	2.22	2.18	2.14	2.23	2.33	0.02	4›2
SECTION D							
36. Impact of F.C. on voluntary activities.	2.61	2.32	2.50	2.71	2.71	0.00	4›1, 3›1, 4›2, 3›2
37. Impact of F.C. on my voluntary activities.	2.65	2.37	2.59	2.71	2.76	0.00	3›1, 4›1
39. Impact of F.C. on my outside employment.	3.38	3.23	3.35	3.37	3.51	0.00	4›1, 4›2, 4›3

F.C. = Financial Constraint
G1 = Doctorate; G2 = Master's degree; G3 = Bachelor's degree; G4 = Diploma (two years or more)
In Section A, the scale is as follows: 1 = strongly decrease; 2 = decrease; 3 = have no effect on; 4 = increase; 5 = strongly increase.
In Sections B and C, the scale is as follows: 1 = very negative; 2 = negative; 3 = neutral/uncertain; 4 = positive; 5 = very positive.
In Section D, the scale is as follows: 1 = decrease greatly; 2 = decrease; 3 = have no effect on; 4 = increase; 5 = increase greatly.

years or more). The "other" group was omitted from the analysis because this group was not specific to a particular level of academic qualification. Of the 19 variables measuring the perceived impact of financial constraint, eight variables were identified as having significant differences. No significant differences were identified for the remaining 11 variables.

Respondents with a Bachelor's degree were more certain that financial constraint would last at least another three years at their institution than were respondents with a Master's degree. Respondents with a Bachelor's degree were significantly more certain that government would probably not increase the funding of their institution next year by more than the rate of inflation than were respondents with a Doctorate, Master's degree or a diploma. Respondents with a Master's degree reported a significantly more negative impact on the quality of instruction at their institution than did respondents with a Bachelor's degree. Respondents with a Doctorate or a Master's degree reported a significantly more negative impact on the socio-economic status of faculty at their institution than did respondents with a diploma. Respondents with a Master's degree reported a significantly more negative impact on their personal socio-economic status than did respondents with a diploma. Respondents with a Doctorate or a Master's degree reported a significantly greater decrease of voluntary service activities at their institution than did respondents with a Bachelor's degree or a diploma. Respondents with a Doctorate reported a significantly greater decrease in their individual voluntary activities at their institution than did respondents with a Bachelor's degree or a diploma. Respondents with a diploma reported a significantly greater increase in their individual outside employment than did respondents with a Doctorate, a Master's degree or a Bachelor's degree.

Overall, the higher the respondents' academic qualifications the more negative were the perceived impact of financial constraint at their institution.

Responses by Tenure Status

Table 4.4 reports the significant differences identified in *t* tests of the perceived impact of financial constraint classified by tenure status. Of the 19 variables measuring the perceived impact of financial constraint, five were identified as having a significant difference. Tenured respondents agreed more strongly than non-tenured respondents that faculty generally viewed financial constraint as a significant problem. Tenured respondents reported a significantly more negative impact on the morale of faculty and on the socio-economic status of faculty than did non-tenured respondents. Tenured respondents reported significantly more decrease in their voluntary activities generally and in their individual voluntary activities than did non-tenured respondents.

TABLE 4.4
PERCEIVED IMPACT OF FINANCIAL CONSTRAINT BY TENURE STATUS

ITEM	TENURED MEAN (N=1165)	NON-TENURED MEAN (N=268)	*t* VALUE*
SECTION A			
22. I view F.C. as a significant problem.	4.16	4.01	2.42
SECTION B			
26. Impact of F.C. on faculty morale.	1.81	1.96	-2.64
27. Impact of F.C. on socio-economic status.	2.15	2.27	-2.32
SECTION D			
36. Impact of F.C. on voluntary activities.	2.59	2.78	-3.12
37. Impact of F.C. on my voluntary activities.	2.63	2.84	-3.55

F.C. = Financial Constraint
*Significant at the 0.05 level.
Ns reported are maximums.
In Section A, the scale is as follows: 1 = strongly disagree; 2 = disagree; 3 = neutral/uncertain; 4 = agree; 5 = strongly agree.
In Section B, the scale is as follows: 1 = very negative; 2 = negative; 3 = neutral/uncertain; 4 = positive; 5 = very positive.
In Section D, the scale is as follows: 1 = decrease greatly; 2 = decrease; 3 = have no effect on; 4 = increase; 5 = increase greatly.

Generally, tenured respondents were more negative about the perceived impact of financial constraint at their institution than were non-tenured respondents.

Responses by Employment Status

Table 4.5 reports the significant differences identified in *t* tests of the perceived impact of financial constraint classified by employment status. Of the 19 variables measuring the perceived impact of financial constraint, eight variables were identified as having significant differences. Non-tenured respondents with continuing appointments agreed more strongly than non-tenured respondents with sessional appointments that financial constraint at their institution would probably last at least another three years. Non-tenured respondents with continuing appointments reported a significantly more negative impact on faculty morale, the socio-economic status of faculty, the overall effectiveness of academic staff, the consideration of priorities generally, their individual quality of instruction and on their individual morale than did non-tenured respondents with sessional appointments. Non-tenured respondents with continuing appointments reported significantly more decrease in their voluntary activities generally than did non-tenured respondents with sessional appointments.

Overall, non-tenured respondents with continuing appointments

TABLE 4.5

PERCEIVED IMPACT OF FINANCIAL CONSTRAINT BY EMPLOYMENT STATUS

ITEM	CONTINUING MEAN (N=301)	SESSIONAL MEAN (N=112)	*t* VALUE*
SECTION A			
23. F.C. will last 3 more years.	3.92	3.56	3.19
SECTION B			
26. Impact of F.C. on faculty morale.	1.86	2.11	-2.81
27. Impact of F.C. on socio-economic status.	2.16	2.46	-4.03
30. Impact of F.C. on effectiveness of academic staff.	2.32	2.50	-2.05
31. Impact of F.C. on consideration of priorities.	2.39	2.61	-2.15
SECTION C			
32. Impact of F.C. on my quality of instruction.	2.40	2.62	-2.67
33. Impact of F.C. on my morale.	2.12	2.32	-2.31
SECTION D			
36. Impact of F.C. on voluntary activities.	2.64	2.89	-2.52

F.C. = Financial Constraint
*Significant at the 0.05 level.
Ns reported are maximums.
In Section A, the scale is as follows: 1 = strongly disagree; 2 = disagree; 3 = neutral/uncertain; 4 = agree; 5 = strongly agree.
In Sections B&C, the scale is as follows: 1 = very negative; 2 = negative; 3 = neutral/uncertain; 4 = positive; 5 = very positive.
In Section D, the scale is as follows: 1 = decrease greatly; 2 = decrease; 3 = have no effect on; 4 = increase; 5 = increase greatly.

were more negative about the perceived impact of financial constraint at their institution than were non-tenured respondents with sessional appointments.

Responses by Nature of Appointment

Table 4.6 reports the significant differences identified in *t* tests of the perceived impact of financial constraint classified by the nature of the appointment, either full-time or part-time. Of the 19 variables measuring the perceived impact of financial constraint, four variables were identified as having significant differences. Full-time respondents agreed more strongly than part-time respondents that financial constraint at their institution would probably last at least another three years. Full-time respondents reported a significantly more negative impact on the socio-economic status of faculty, or the achievement of faculty career aspirations and on the overall effectiveness of academic staff than did part-time respondents.

Although this study was delimited to employees classified as full-time faculty members, 57 (4.0%) of the respondents classified themselves as part-time faculty members. Generally, full-time respondents were more negative about the perceived impact of financial constraint at their institution than were part-time respondents.

TABLE 4.6
PERCEIVED IMPACT OF FINANCIAL CONSTRAINT BY NATURE OF APPOINTMENT

ITEM	FULL-TIME MEAN (N=1364)	PART-TIME MEAN (N=55)	*t* VALUE*
SECTION A			
23. F.C. will last 3 more years.	3.88	3.44	3.22
SECTION B			
27. Impact of F.C. on socio-economic status.	2.16	2.55	-3.73
28. Impact of FC on faculty career aspirations.	2.28	2.62	-3.26
30. Impact of F.C. on effectiveness of academic staff.	2.32	2.53	-2.01

F.C. = Financial Constraint
*Significant at the 0.05 level.
Ns reported are maximums.
In Section A, the scale is as follows: 1 = strongly disagree; 2 = disagree; 3 = neutral/uncertain; 4 = agree; 5 = strongly agree.
In Section B, the scale is as follows: 1 = very negative; 2 = negative; 3 = neutral/uncertain; 4 = positive; 5 = very positive.

Responses by Administrative Position

Table 4.7 reports the significant differences identified in *t* tests of the perceived impact of financial constraint classified by administrative position. Of the 19 variables measuring the perceived impact of financial constraint, three variables were identified as having significant differences. Respondents occupying an administrative position agreed more strongly than respondents not occupying an administrative position that faculty generally, and the respondent personally, perceive financial constraint at their institution as a significant problem. Administrative respondents reported a significantly greater increase in their outside employment than did non-administrative respondents.

Generally, the perceived impact of financial constraint was similar for both administrative and non-administrative respondents. Administrative respondents perceived the impact of financial constraint to be a somewhat more significant problem than non-administrative respondents.

Responses by Province

Table 4.8 reports the significant differences identified in the one-way analysis of variance of the perceived impact of financial constraint classified by province. Of the 19 variables measuring the perceived impact of financial constraint, 15 were identified as having significant

TABLE 4.7

PERCEIVED IMPACT OF FINANCIAL CONSTRAINT BY ADMINISTRATIVE POSITION

ITEM	NO ADMIN. POSITION MEAN (N=1096)	ADMIN. POSITION MEAN (N=335)	*t* VALUE*
SECTION A			
21. Faculty perceive F.C. as a significant problem.	4.16	4.34	-3.40
22. I view F.C. as a significant problem.	4.10	4.24	-2.32
SECTION D			
38. Impact of F.C. on outside employment.	3.49	3.58	-2.03

F.C. = Financial Constraint
*Significant at the 0.05 level.
Ns reported are maximums.
In Section A, the scale is as follows: 1 = strongly disagree; 2 = disagree; 3 = neutral/uncertain; 4 = agree; 5 = strongly agree.
In Section D, the scale is as follows: 1 = decrease greatly; 2 = decrease; 3 = have no effect on; 4 = increase; 5 = increase greatly.

TABLE 4.8
PERCEIVED IMPACT OF FINANCIAL CONSTRAINT BY PROVINCE

	MEANS						
ITEM	Overall	G1	G2	G3	G4	F Prob.	Intergroup Differences
SECTION A							
21. Faculty perceive F.C. as significant problem.	4.21	4.07	4.32	4.10	4.33	0.00	2>1, 4>1
22. I view F.C. as a significant problem.	4.13	3.96	4.20	4.13	4.39	0.00	4>1, 2>1, 4>2
23. F.C. will last 3 more years.	3.86	3.98	3.53	4.15	4.21	0.00	4>2, 3>2, 1>2, 4>1
24. Gov't will increase funding by more than inflation next year.	2.19	2.06	2.53	1.99	1.75	0.00	2>4, 2>3, 2>1, 1>4
SECTION B							
25. Impact of F.C. on quality of instruction.	2.17	2.28	2.02	2.35	2.20	0.00	3>2, 1>2, 4>2
26. Impact of F.C. on faculty morale.	1.84	1.96	1.75	2.02	1.70	0.00	3>4, 1>4, 3>2, 1>2
27. Impact of F.C. on socio-economic status.	2.18	2.26	2.11	2.44	2.01	0.00	3>4, 1>4, 3>2, 1>2
28. Impact of F.C. on faculty career aspirations.	2.29	2.38	2.24	2.29	2.19	0.00	1>4, 1>2
29. Impact of F.C. on efficient use of resources.	2.60	2.80	2.40	2.53	2.63	0.00	1>2, 1>3, 4>2

TABLE 4.8 (Concluded)
PERCEIVED IMPACT OF FINANCIAL CONSTRAINT BY PROVINCE

ITEM	MEANS						Intergroup Differences
	Overall	G1	G2	G3	G4	F Prob.	
SECTION B							
30. Impact of F.C. on effectiveness of academic staff.	2.33	2.42	2.22	2.42	2.30	0.00	1>2
31. Impact of F.C. on consideration of priorities.	2.38	2.46	2.29	2.50	2.33	0.01	1>2
SECTION C							
32. Impact of F.C. on my quality of instruction.	2.44	2.52	2.33	2.55	2.43	0.00	3>2, 1>2
33. Impact of F.C. on my morale.	2.13	2.22	2.08	2.30	1.98	0.00	3>4, 1>4, 3>2, 1>2
34. Impact of F.C. on my socio-economic status.	2.23	2.28	2.20	2.53	2.06	0.00	3>4, 3>2, 3>1, 1>4
SECTION D							
36. Impact of F.C. on voluntary activities.	2.62	2.69	2.49	2.71	2.73	0.00	4>2, 1>2

F.C. = Financial Constraint
G1 = Alberta; G2 = British Columbia; G3 = Manitoba; G4 = Saskatchewan

In Section A, the scale is as follows: 1 = strongly disagree; 2 = disagree; 3 = neutral/uncertain; 4 = agree; 5 = strongly agree.
In Sections B&C, the scale is as follows: 1 = very negative; 2 = negative; 3 = neutral/uncertain; 4 = positive; 5 = very positive.
In Section D, the scale is as follows: 1 = decrease greatly; 2 = decrease; 3 = have no effect on; 4 = increase; 5 = increase greatly.

differences. Respondents from British Columbia and Saskatchewan agreed more strongly than respondents from Alberta that faculty generally and individually viewed financial constraint as a significant problem. Respondents from Saskatchewan agreed more strongly than respondents from British Columbia that faculty individually viewed financial constraint as a significant problem. Respondents from Saskatchewan, Manitoba and Alberta agreed more strongly than respondents from British Columbia that financial constraint would probably last for at least another three years. Respondents from Saskatchewan also agreed more strongly than respondents from Alberta that financial constraint would probably last for at least another three years. Respondents from Saskatchewan, Manitoba and Alberta disagreed more strongly than respondents from British Columbia that government would probably increase the funding of their institution next year by more than the rate of inflation. Respondents from Saskatchewan also disagreed more strongly than respondents from Alberta that government would probably increase the funding of their institution next year by more than the rate of inflation.

Respondents from British Columbia reported a significantly more negative impact of financial constraint on the quality of instruction than did respondents from Manitoba, Saskatchewan and Alberta. Respondents from British Columbia and Saskatchewan reported a significantly more negative impact on faculty morale, on their individual morale, and on the socio-economic status of faculty than did respondents from Alberta and Manitoba. Respondents from British Columbia reported a significantly more negative impact on the achievement of faculty career aspirations, on the efficient use of resources, on the overall effectiveness of academic staff, on the consideration of priorities, and on their individual quality of instruction than did respondents from Alberta. Respondents from Saskatchewan also reported a significantly more negative impact on the achievement of faculty career aspirations and on their individual socio-economic status than did respondents from Alberta. Respondents from British Columbia reported a significantly more negative impact on the efficient use of resources than did respondents from Alberta and Saskatchewan. Respondents from Manitoba also reported a significantly more negative impact on the efficient use of resources than did respondents from Alberta. Respondents from British Columbia reported a significantly more negative impact on their individual quality of instruction than did respondents from Manitoba and Alberta. Saskatchewan, British Columbia and Alberta reported a significantly more negative impact on their individual socio-economic status than did respondents from Manitoba. As noted above, respondents from Saskatchewan also reported a significantly more negative impact on their individual socio-economic status than did respondents from Alberta.

Respondents from British Columbia reported significantly more decrease in their voluntary service activities than did respondents from Saskatchewan and Alberta.

Overall, respondents from British Columbia and Saskatchewan perceive financial constraint to be a more significant problem than do respondents from Alberta and Manitoba. Respondents from British Columbia, however, were less pessimistic than respondents from Alberta, Manitoba and Saskatchewan about funding increases for the next three years. Respondents from British Columbia were generally significantly more negative about the impact of financial constraint than were respondents from Alberta, Saskatchewan and Manitoba. Respondents from Saskatchewan were also generally more negative about the impact of financial constraint than respondents from Alberta and Manitoba.

Responses by Sector

Table 4.9 reports the significant differences identified in *t* tests of the perceived impact of financial constraint classified by sector, either college or technical institute. Of the 19 variables measuring the perceived impact of financial constraint, 13 variables were identified as having significant differences. Respondents from technical institutes agreed more strongly than respondents from colleges that faculty generally and individually viewed financial constraint as a significant problem and that financial constraint would probably last for at least another three years.

TABLE 4.9

PERCEIVED IMPACT OF FINANCIAL CONSTRAINT BY SECTOR (COLLEGE OR INSTITUTE)

ITEM	COLLEGE MEAN (N=945)	INSTITUTE MEAN (N=492)	*t* VALUE*
SECTION A			
21. Faculty perceive F.C. as a significant problem.	4.16	4.29	-2.82
22. I view F.C. as a significant problem.	4.07	4.25	-3.50
23. F.C will last 3 more years.	3.73	4.11	-6.85
24. Gov't will increase funding by more than inflation next year.	2.30	1.96	5.88
SECTION B			
26. Impact of F.C. on faculty morale.	1.90	1.73	3.73
27. Impact of F.C. on socio-economic status.	2.24	2.05	4.47
28. Impact of F.C. on faculty career aspirations.	2.33	2.22	2.65
30. Impact of F.C. on effectiveness of academic staff.	2.36	2.27	2.19
SECTION C			
33. Impact of F.C. on my morale.	2.18	2.04	3.21

TABLE 4.9 (Concluded)

PERCEIVED IMPACT OF FINANCIAL CONSTRAINT BY SECTOR (COLLEGE OR INSTITUTE)

ITEM	COLLEGE MEAN (N=945)	INSTITUTE MEAN (N=492)	*t* VALUE*
SECTION C			
34. Impact of F.C. on my socio-economic status.	2.30	2.10	4.70
35. Impact of F.C. on my career aspirations.	2.48	2.32	3.52
SECTION D			
38. Impact of F.C. on outside employment.	3.47	3.58	-2.76
39. Impact of F.C. on my outside employment.	3.34	3.49	-4.10

F.C. = Financial Constraint
*Significant at the 0.05 level.
Ns reported are maximums.
In Section A, the scale is as follows: 1 = strongly disagree; 2 = disagree; 3 = neutral/uncertain; 4 = agree; 5 = strongly agree.
In Sections B&C, the scale is as follows: 1 = very negative; 2 = negative; 3 = neutral/uncertain; 4 = positive; 5 = very positive.
In Section D, the scale is as follows: 1 = decrease greatly; 2 = decrease; 3 = have no effect on; 4 = increase; 5 = increase greatly.

Respondents from technical institutes disagreed more strongly than respondents from colleges that government would probably increase the funding of their institution next year by more than the rate of inflation. Respondents from technical institutes reported a significantly more negative impact on faculty morale, on the socio-economic status of faculty, on the achievement of faculty career aspirations, on the overall effectiveness of academic staff, on their individual morale, on the individual socio-economic status of faculty and on the achievement of their individual career aspirations than respondents from colleges. Respondents from technical institutes reported that the impact of financial constraint was to increase more greatly the outside employment of faculty and the individual outside employment of faculty than did respondents from colleges.

Overall, respondents from technical institutes were more negative about the impact of financial constraint than were respondents from colleges.

Responses by Size of Institution

Table 4.10 reports the significant differences identified in the one-way analysis of variance of the perceived impact of financial constraint classified by size of institution. Data were grouped into five categories of full-time equivalent students. The researcher believes that many respondents either did not understand the term "full-time equivalent

TABLE 4.10

PERCEIVED IMPACT OF FINANCIAL CONSTRAINT BY SIZE OF INSTITUTION

ITEM	MEANS							Intergroup Differences
	Overall	G1	G2	G3	G4	G5	F Prob.	
SECTION A								
21. Faculty perceive F.C. as a significant problem.	4.20	4.10	4.17	4.17	4.33	4.29	0.01	4›1
23. F.C. will last three more years.	3.87	3.89	3.89	3.61	3.98	4.11	0.00	5›3, 4›3, 2›3, 1›3
24. Gov't will increase funding by more than inflation next year.	2.19	1.97	2.33	2.49	2.10	2.14	0.00	3›1, 2›1, 3›4
SECTION B								
25. Impact of F.C. on quality of instruction.	2.17	2.29	2.16	2.10	2.13	2.15	0.02	1›3
27. Impact of F.C. on socio-economic status.	2.16	2.27	2.17	2.19	2.05	2.05	0.00	1›4
29. Impact of F.C. on efficient use of resources.	2.60	2.71	2.46	2.67	2.53	2.71	0.01	1›2
30. Impact of F.C. on effectiveness of academic staff.	2.32	2.43	2.25	2.28	2.26	2.41	0.01	1›2, 1›4

TABLE 4.10 (Concluded)

PERCEIVED IMPACT OF FINANCIAL CONSTRAINT BY SIZE OF INSTITUTION

ITEM	MEANS							Intergroup
	Overall	G1	G2	G3	G4	G5	F Prob.	Differences
SECTION D								
36. Impact of F.C. on voluntary activities.	2.60	2.76	2.50	2.51	2.58	2.59	0.00	1>2, 1>3, 1>4
37. Impact of F.C. on my voluntary activities.	2.65	2.78	2.53	2.65	2.59	2.65	0.01	1>2, 1>4

F.C. = Financial Constraint

G1 = Fewer than 1,500 full-time equivalent (FTE) students; G2 = 1,500 to 2,999 FTE students; G3 = 3,000 to 4,999 FTE students; G4 = 5,000 to 9,999 FTE students; G5 = 10,000 or more FTE students.

In Section A, the scale is as follows: 1 = strongly disagree; 2 = disagree; 3 = neutral/uncertain; 4 = agree; 5 = strongly agree.
In Section B, the scale is as follows: 1 = very negative; 2 = negative; 3 = neutral/uncertain; 4 = positive; 5 = very positive.
In Section D, the scale is as follows: 1 = decrease greatly; 2 = decrease; 3 = have no effect on; 4 = increase; 5 = increase greatly.

student" or did not know the number of full-time equivalent students that attended their institution in 1988-89. Of the 19 variables measuring the perceived impact of financial constraint, nine variables were identified as having significant differences. Respondents from an institution with 5,000 to 9,999 full-time equivalent students (FTEs) agreed more strongly than respondents from an institution of fewer than 1,500 FTEs that faculty generally viewed financial constraint as a significant problem. Respondents from an institution with 3,000 to 4,999 FTEs agreed less strongly than all other respondents that financial constraint would probably last for at least another three years. Respondents from an institution with fewer than 1,500 FTEs disagreed more strongly than respondents from an institution with 1,500 to 2,999 FTEs or 3,000 to 4,999 FTEs that government will probably increase the funding of their institution next year by more than the rate of inflation. Respondents from an institution with 5,000 to 9,999 FTEs also disagreed more strongly than respondents from an institution with 3,000 to 4,999 FTEs that government will probably increase the funding of their institution next year by more than the rate of inflation. Respondents from an institution with 3,000 to 4,999 FTEs reported a significantly more negative impact on the quality of instruction than did respondents from an institution with fewer than 1,500 FTEs. Respondents from an institution with 5,000 to 9,999 FTEs reported a significantly more negative impact on the socio-economic status of faculty and on the overall effectiveness of academic staff than did respondents from an institution with fewer than 1,500 FTEs. Respondents from an institution with 1,500 to 2,999 FTEs reported a significantly more negative impact on the efficient use of resources and on the overall effectiveness of academic staff than did respondents from an institution with fewer than 1,500 FTEs. Respondents from institutions with 1,500 to 2,999 FTEs, 3,000 to 4,999 FTEs or 5,000 to 9,999 FTEs reported significantly more decrease in voluntary service activities than did respondents from an institution with fewer than 1,500 FTEs. Respondents from institutions with 1,500 to 2,999 FTEs or 5,000 to 9,999 FTEs also reported significantly more decrease in their individual voluntary service activities than did respondents from an institution with fewer than 1,500 FTEs.

Overall, respondents from institutions with fewer than 1,500 FTEs were less negative about the impact of financial constraint than were respondents from larger institutions.

Responses by Years Employed at Institution

Table 4.11 reports the significant differences identified in the one-way analysis of variance of the perceived impact of financial constraint classified by years employed at institution. No respondents reported being employed at their institutions for 30 years or more. Of the 19 variables measuring the perceived impact of financial constraint, 13

TABLE 4.11

PERCEIVED IMPACT OF FINANCIAL CONSTRAINT BY YEARS EMPLOYED AT INSTITUTION

ITEM	MEANS						Intergroup Differences
	Overall	G1	G2	G3	G4	F Prob.	
SECTION A							
21. Faculty perceive F.C. as a significant problem.	4.21	4.09	4.17	4.26	4.37	0.00	4>1, 3>1
22. I view F.C. as a significant problem.	4.13	4.01	4.10	4.20	4.26	0.01	4>1, 3>1
SECTION B							
25. Impact of F.C. on quality of instruction.	2.18	2.30	2.16	2.12	2.10	0.00	1>4, 1>3, 1>2
26. Impact of F.C. on faculty morale.	1.84	2.04	1.84	1.74	1.72	0.00	1>4, 1>3, 1>2
27. Impact of F.C. on socio-economic status.	2.18	2.29	2.25	2.10	1.98	0.00	1>4, 1>3, 2>4, 2>3
28. Impact of F.C. on faculty career aspirations.	2.29	2.37	2.33	2.23	2.22	0.02	1>3
30. Impact of F.C. on effectiveness of academic staff.	2.33	2.41	2.35	2.23	2.37	0.00	1>3
SECTION C							
32. Impact of F.C. on my quality of instruction.	2.44	2.52	2.46	2.35	2.47	0.01	1>3
33. Impact of F.C. on my morale.	2.13	2.32	2.15	2.01	2.07	0.00	1>3, 1>4, 1>2, 2>3

TABLE 4.11 (Concluded)

PERCEIVED IMPACT OF FINANCIAL CONSTRAINT BY YEARS EMPLOYED AT INSTITUTION

ITEM	MEANS						Intergroup Differences
	Overall	G1	G2	G3	G4	F Prob.	
SECTION C							
34. Impact of F.C. on my socio-economic status.	2.23	2.33	2.29	2.15	2.14	0.00	1>3, 2>3
SECTION D							
36. Impact of F.C. on voluntary activities.	2.62	2.73	2.74	2.53	2.40	0.00	2>4, 1>4, 2>3, 1>3
37. Impact of F.C. on my voluntary activities.	2.67	2.78	2.76	2.59	2.46	0.00	1>4, 2>4, 1>3, 2>3
39. Impact of F.C. on my outside employment.	3.39	3.48	3.38	3.34	3.39	0.02	1>3

F.C. = Financial Constraint

G1 = less than 5 years; G2 = 5 to 9 years; G3 = 10 to 19 years; G4 = 20 to 29 years.

In Section A, the scale is as follows: 1 = strongly disagree; 2 = disagree; 3 = neutral/uncertain; 4 = agree; 5 = strongly agree.
In Sections B&C, the scale is as follows: 1 = very negative; 2 = negative; 3 = neutral/uncertain; 4 = positive; 5 = very positive.
In Section D, the scale is as follows: 1 = decrease greatly; 2 = decrease; 3 = have no effect on; 4 = increase; 5 = increase greatly.

variables were identified as having significant differences. Respondents employed at their institutions for 20 to 29 years or 10 to 19 years agreed more strongly than respondents employed at their institutions for less than 5 years that faculty perceive financial constraint as a significant problem and that they viewed financial constraint individually as a significant problem. Respondents employed at their institutions 5 to 9 years, 10 to 19 years or 20 to 29 years reported a significantly more negative impact on the quality of instruction and on faculty morale than did respondents employed at their institutions less than 5 years. Respondents employed at their institutions 20 to 29 years or 10 to 19 years reported a significantly more negative impact on the socio-economic status of faculty than did respondents employed at their institutions less than 5 years or 5 to 9 years. Respondents employed at their institutions 10 to 19 years reported a significantly more negative impact on the achievement of faculty career aspirations, on the overall effectiveness of academic staff and on the individual quality of instruction than did respondents employed at their institutions less than 5 years. Respondents employed at their institutions 20 to 29 years, 10 to 19 years and 5 to 9 years reported a significantly more negative impact on their individual morale than did respondents employed at their institutions less than 5 years. Respondents employed at their institutions 10 to 19 years also reported a significantly more negative impact on their individual morale and on their individual socio-economic status than did respondents employed at their institutions 5 to 9 years or less than 5 years. Respondents employed at their institutions 20 to 29 years or 10 to 19 years reported significantly more decrease in their voluntary service generally and in their individual voluntary service activities than did respondents employed at their institutions 5 to 9 years or less than 5 years. Respondents employed at their institutions fewer than 5 years reported a significantly greater increase in their individual outside employment than did respondents employed at their institutions 10 to 19 years.

Generally, the perceived impact of financial constraint varied by the years the respondents were employed at their institutions. Respondents employed at their institutions less than 5 years were the least negative about the perceived impact of financial constraint and respondents employed at their institutions 10 to 19 years were the most negative about the perceived impact of financial constraint.

Responses by Age

Table 4.12 reports the significant differences identified in the one-way analysis of variance of the perceived impact of financial constraint classified by age. Since the percentages of respondents "under 30 years" was only 2.1 percent and "60 years and over" was only 2.4 percent, these age categories were included in the "30 - 39 years" age category and the "50 - 59 years" age category, respectively. The modified age categories are

TABLE 4.12

PERCEIVED IMPACT OF FINANCIAL CONSTRAINT BY AGE

ITEM	MEANS					Intergroup Differences
	Overall	G1	G2	G3	F Prob.	
SECTION A						
24. Gov't will increase funding by more than inflation next year.	2.18	2.07	2.21	2.27	0.02	3>1, 2>1
SECTION B						
26. Impact of F.C. on faculty morale.	1.84	1.85	1.78	1.93	0.02	3>2
27. Impact of F.C. on socio-economic status.	2.17	2.23	2.11	2.23	0.01	1>2, 3>2
30. Impact of F.C. on effectiveness of academic staff.	2.33	2.34	2.26	2.44	0.00	3>2
SECTION C						
33. Impact of F.C. on my morale.	2.13	2.20	2.07	2.18	0.02	1>2
34. Impact of F.C. on my socio-economic status.	2.23	2.27	2.14	2.36	0.00	3>2, 1>2
35. Impact of F.C. on my career aspirations.	2.42	2.36	2.39	2.55	0.00	3>1, 3>2

TABLE 4.12 (Concluded)

PERCEIVED IMPACT OF FINANCIAL CONSTRAINT BY AGE

ITEM	MEANS					Intergroup Differences
	Overall	G1	G2	G3	F Prob.	
SECTION D						
38. Impact of F.C. on outside employment.	3.51	3.51	3.56	3.42	0.01	2›3
39. Impact of F.C. on my outside employment.	3.39	3.45	3.39	3.31	0.02	1›3

F.C. = Financial Constraint

G1 = under 40 years; G2 = 40 to 49 years; G3 = 50 years and over

In Section A, the scale is as follows: 1 = strongly disagree; 2 = disagree; 3 = neutral/uncertain; 4 = agree; 5 = strongly agree.
In Sections B&C, the scale is as follows: 1 = very negative; 2 = negative; 3 = neutral/uncertain; 4 = positive; 5 = very positive.
In Section D, the scale is as follows: 1 = decrease greatly; 2 = decrease; 3 = have no effect on; 4 = increase; 5 = increase greatly.

"under 40 years," "40 - 49 years" and "50 years and over." Of the 19 variables measuring the perceived impact of financial constraint, nine were identified as having significant differences. Respondents under 40 years disagreed more strongly than respondents 40 to 49 years or 50 years and older that government will probably increase funding next year by more than the rate of inflation. Respondents 40 to 49 years reported a significantly more negative impact on faculty morale, on the socio-economic status of faculty, on the overall effectiveness of academic staff, on their individual socio-economic status and on their individual achievement of career aspirations than did respondents 50 years and over. Respondents 40 to 49 years also reported a significantly more negative impact on the socio-economic status of faculty, on their individual morale, and on their individual socio-economic status than did respondents under 40 years. Respondents under 40 years reported a significantly more negative impact on their individual achievement of career aspirations than did respondents 50 years and over. Respondents 40 to 49 years reported a significantly greater increase in the outside employment of faculty than did respondents 50 years and older. Respondents under 40 years reported a significantly greater increase in their individual outside employment than did respondents 50 years and older.

Generally, respondents 40 to 49 years were more negative about the perceived impact of financial constraint than were the older or younger respondents. The group closest to retirement tended to perceive less of a negative impact than did the two younger groups.

Responses by Sex

Table 4.13 reports the significant differences identified in *t* tests of the perceived impact of financial constraint classified by sex. Of the 19 variables measuring the perceived impact of financial constraint, eight were identified as having significant differences. Female respondents disagreed more strongly than did male respondents that government will probably increase funding next year by more than the rate of inflation. Male respondents reported a significantly more negative impact on the quality of instruction, on the socio-economic status of faculty, and on their individual socio-economic status than did female respondents. Female respondents reported a significantly more negative impact on the efficient use of resources than did male respondents. Male respondents reported a significantly greater decrease in voluntary service activities than did female respondents. Male respondents also reported a significantly greater increase in their individual outside employment than did female respondents. Generally, male respondents were more negative about the impact of financial constraint than female respondents.

TABLE 4.13

PERCEIVED IMPACT OF FINANCIAL CONSTRAINT BY SEX

ITEM	FEMALE MEAN (N=496)	MALE MEAN (N=931)	*t* VALUE*
SECTION A			
24. Gov't will increase funding by more than inflation next year.	2.10	2.22	-2.12
SECTION B			
25. Impact of F.C. on quality of instruction.	2.23	2.15	2.10
27. Impact of F.C. on socio-economic status.	2.28	2.12	3.70
29. Impact of F.C. on efficient use of resources.	2.52	2.64	-2.24
SECTION C			
34. Impact of F.C. on my socio-economic status.	2.36	2.17	4.24
SECTION D			
36. Impact of F.C. on voluntary activities.	2.77	2.54	4.55
37. Impact of F.C. on my voluntary activities.	2.78	2.61	3.62
39. Impact of F.C. on my outside employment.	3.26	3.46	-5.67

TABLE 4.13 (Concluded)

PERCEIVED IMPACT OF FINANCIAL CONSTRAINT BY SEX

F.C. = Financial Constraint

*Significant at the 0.05 level.

Ns reported are maximums.

In Section A, the scale is as follows: 1 = strongly disagree; 2 = disagree; 3 = neutral/uncertain; 4 = agree; 5 = strongly agree.
In Sections B&C, the scale is as follows: 1 = very negative; 2 = negative; 3 = neutral/uncertain; 4 = positive; 5 = very positive.
In Section D, the scale is as follows: 1 = decrease greatly; 2 = decrease; 3 = have no effect on; 4 = increase; 5 = increase greatly.

Responses by Full-Time Faculty Positions Lost By The Institution

Table 4.14 reports the significant differences identified in the one-way analysis of variance of the perceived impact of financial constraint classified by full-time faculty positions lost by the institution in the last five years as a result of financial constraint. Respondents were asked to reply "no," "yes" or "don't know." Of the 19 variables measuring the perceived impact of financial constraint, 14 were identified as having significant differences. Respondents from institutions that lost full-time faculty positions in the last five years agreed more strongly than did respondents from institutions that had not lost full-time faculty positions in the last five years and respondents who didn't know if their institutions had lost full-time faculty position in the last five years that faculty viewed financial constraint as a significant problem, that they individually viewed financial constraint as a significant problem at their respective institutions and that financial constraint would probably last at least another three years. Respondents from institutions that lost full-time faculty positions in the last five years disagreed more strongly than did respondents from institutions that had not lost full-time faculty positions in the last five years and respondents who didn't know if their institutions had lost full-time faculty positions in the last five years that government will probably increase the funding next year by more than the rate of inflation. Respondents from institutions that lost full-time faculty positions in the

TABLE 4.14
PERCEIVED IMPACT OF FINANCIAL CONSTRAINT BY FACULTY POSITIONS LOST BY INSTITUTION

ITEM	MEANS					Intergroup Differences
	Overall	G1	G2	G3	F Prob.	
SECTION A						
21. Faculty perceive F.C. as a significant problem.	4.20	3.98	4.33	4.03	0.00	2>1, 2>3
22. I view F.C. as a significant problem.	4.13	3.83	4.30	3.92	0.00	2>1, 2>3
23. F.C. will last three more years.	3.86	3.65	3.98	3.70	0.00	2>1, 2>3
24. Gov't will increase funding by more than inflation next year.	2.19	2.35	2.10	2.30	0.00	1>2, 3>2
SECTION B						
25. Impact of F.C. on quality of instruction.	2.18	2.33	2.07	2.33	0.00	3>2, 1>2
26. Impact of F.C. on faculty morale.	1.84	2.00	1.70	2.06	0.00	3>2, 1>2
27. Impact of F.C. on socio-economic status.	2.17	2.31	2.07	2.35	0.00	3>2, 1>2
28. Impact of F.C. on faculty career aspirations.	2.29	2.38	2.22	2.41	0.00	3>2, 1>2
30. Impact of F.C. on effectiveness of academic staff.	2.33	2.43	2.25	2.45	0.00	3>2, 1>2

TABLE 4.14 (Concluded)

PERCEIVED IMPACT OF FINANCIAL CONSTRAINT BY FACULTY POSITIONS LOST BY INSTITUTION

ITEM	MEANS Overall	G1	G2	G3	F Prob.	Intergroup Differences
SECTION C						
32. Impact of F.C. on my quality of instruction.	2.44	2.51	2.37	2.55	0.00	3>2, 1>2
33. Impact of F.C. on my morale.	2.13	2.29	2.01	2.34	0.00	3>2, 1>2
34. Impact of F.C. on my socio-economic status.	2.23	2.31	2.14	2.39	0.00	3>2, 1>2
35. Impact of F.C. on my career aspirations.	2.42	2.52	2.36	2.52	0.00	3>2, 1>2
SECTION D						
38. Impact of F.C. on outside employment.	3.51	3.41	3.55	3.47	0.02	2>1

F.C. = Financial Constraint

G1 = No; G2 = Yes; G3 = Don't know

In Section A, the scale is as follows: 1 = strongly disagree; 2 = disagree; 3 = neutral/uncertain; 4 = agree; 5 = strongly agree.
In Sections B&C, the scale is as follows: 1 = very negative; 2 = negative; 3 = neutral/uncertain; 4 = positive; 5 = very positive.
In Section D, the scale is as follows: 1 = decrease greatly; 2 = decrease; 3 = have no effect on; 4 = increase; 5 = increase greatly.

last five years reported a significantly more negative impact on the quality of instruction, on faculty morale, on the socio-economic status of faculty, on the achievement of faculty career aspirations, on the overall effectiveness of academic staff, on their individual quality of instruction, on their individual morale, on their individual socio-economic status and on the achievement of their individual career aspirations than did respondents from institutions that had not lost full-time faculty positions in the last five years and respondents who didn't know if their institutions had lost full-time faculty positions in the last five years. Respondents from institutions that lost full-time faculty positions in the last five years reported a significantly greater increase in the outside employment of faculty than did respondents from institutions that had not lost full-time faculty positions in the last five years.

Overall, respondents from institutions that had lost full-time faculty members in the last five years were much more negative than the other respondents.

Responses by Full-Time Faculty Positions Lost By The Department

Table 4.15 reports the significant differences identified in the one-way analysis of variance of the perceived impact of financial constraint classified by full-time faculty positions lost by the department in the last five years as a result of financial constraint. Respondents were asked to reply "no," "yes" or "don't know." Of the 19 variables measuring the

TABLE 4.15

PERCEIVED IMPACT OF FINANCIAL CONSTRAINT BY FACULTY POSITIONS LOST BY DEPARTMENT

ITEM	MEANS					Intergroup Differences
	Overall	G1	G2	G3	F Prob.	
SECTION A						
21. Faculty perceive F.C. as a significant problem.	4.21	4.12	4.41	3.99	0.00	2>3, 2>1
22. I view F.C. as a significant problem.	4.13	4.01	4.39	3.94	0.00	2>3, 2>1
23. F.C. will last three more years.	3.86	3.79	4.06	3.57	0.00	2>3, 2>1, 1>3
24. Gov't will increase funding by more than inflation next year.	2.18	2.24	2.05	2.37	0.00	3>2, 1>2
SECTION B						
25. Impact of F.C. on quality of instruction.	2.17	2.22	2.05	2.35	0.00	3>2, 1>2
26. Impact of F.C. on faculty morale.	1.84	1.89	1.67	2.15	0.00	3>2, 3>1, 1>2
27. Impact of F.C. on socio-economic status.	2.17	2.22	2.03	2.39	0.00	3>2, 3>1, 1>2
28. Impact of F.C. on faculty career aspirations.	2.30	2.35	2.19	2.40	0.00	3>2, 1>2
29. Impact of F.C. on efficient use of resources.	2.61	2.67	2.48	2.67	0.00	1>2

TABLE 4.15 (Continued)

PERCEIVED IMPACT OF FINANCIAL CONSTRAINT BY FACULTY POSITIONS LOST BY DEPARTMENT

ITEM	MEANS Overall	G1	G2	G3	F Prob.	Intergroup Differences
SECTION B						
30. Impact of F.C. on effectiveness of academic staff.	2.33	2.37	2.22	2.47	0.00	3>2, 1>2
31. Impact of F.C. on consideration of priorities.	2.38	2.42	2.29	2.48	0.03	1>2
SECTION C						
32. Impact of F.C. on my quality of instruction.	2.44	2.48	2.33	2.61	0.00	3>2, 1>2
33. Impact of F.C. on my morale.	2.14	2.24	1.92	2.30	0.00	3>2, 1>2
34. Impact of F.C. on my socio-economic status.	2.23	2.31	2.07	2.34	0.00	3>2, 1>2
35. Impact of F.C. on my career aspirations.	2.42	2.49	2.30	2.42	0.00	1>2
SECTION D						
37. Impact of F.C. on my voluntary activities.	2.67	2.74	2.57	2.62	0.00	1>2

TABLE 4.15 (Concluded)

PERCEIVED IMPACT OF FINANCIAL CONSTRAINT BY FACULTY POSITIONS LOST BY DEPARTMENT

ITEM	MEANS					Intergroup Differences
	Overall	G1	G2	G3	F Prob.	
SECTION D						
38. Impact of F.C. on outside employment.	3.51	3.48	3.58	3.48	0.03	2>1
39. Impact of F.C. on my outside employment.	3.39	3.37	3.40	3.53	0.05	3>1

F.C. = Financial Constraint

G1 = No; G2 = Yes; G3 = Don't know

In Section A, the scale is as follows: 1 = strongly disagree; 2 = disagree; 3 = neutral/uncertain; 4 = agree; 5 = strongly agree.
In Sections B&C, the scale is as follows: 1 = very negative; 2 = negative; 3 = neutral/uncertain; 4 = positive; 5 = very positive.
In Section D, the scale is as follows: 1 = decrease greatly; 2 = decrease; 3 = have no effect on; 4 = increase; 5 = increase greatly.

perceived impact of financial constraint, 18 were identified as having significant differences. Respondents from departments that lost full-time faculty positions in the last five years agreed more strongly than did respondents from departments that had not lost faculty positions in the last five years and respondents who didn't know if their departments had lost full-time faculty positions in the last five years that faculty viewed financial constraint as a significant problem, that they individually viewed financial constraint as a significant problem and that financial constraint would probably last at least another three years. Respondents from departments that had not lost full-time faculty positions in the last five years agreed more strongly than did respondents who didn't know if their departments had lost full-time faculty positions in the last five years that financial constraint would probably last at least another three years. Respondents from departments that lost full-time faculty positions in the last five years disagreed more strongly than did respondents from departments that had not lost faculty positions in the last five years and respondents who didn't know if their departments had lost full-time faculty positions in the last five years that government would probably increase the funding next year by more than the rate of inflation. Respondents from departments that lost full-time faculty positions in the last five years reported a significantly more negative impact on the quality of instruction, on faculty morale, on the socio-economic status of faculty, on the achievement of faculty career aspirations, on the overall effectiveness of academic staff, on their individual quality of instruction, on their individual morale and on their individual socio-economic status than did respondents from departments that had not lost faculty positions in the last five years and respondents who didn't know if their departments had lost full-time faculty positions in the last five years. Respondents from departments that had not lost faculty positions in the last five years reported a significantly more negative impact on faculty morale and on the socio-economic status of faculty than did respondents who didn't know if their departments had lost full-time faculty positions in the last five years. Respondents from departments that lost full-time faculty positions in the last five years also reported a significantly more negative impact on the efficient use of resources, on the consideration of priorities and on the achievement of individual career aspirations than did respondents from departments that had not lost full-time faculty positions in the last five years. Respondents from departments that lost full-time faculty positions in the last five years reported significantly more decrease in voluntary service activities than did respondents from departments that had not lost full-time faculty positions in the last five years. Respondents who didn't know if their departments had lost full-time faculty positions in the last five years reported a significantly greater increase in their individual outside employment than did respondents from departments that had not lost full-time faculty positions in the last five years.

Overall, respondents from departments that had lost full-time faculty positions in the last five years, due to financial constraint, were much more negative about the impact of financial constraint than the other respondents.

Responses by Fair Financial Treatment of the Institution

Table 4.16 reports the significant differences identified in *t* tests of the perceived impact of financial constraint classified by fair financial treatment of the institution in the last five years. Respondents were asked to respond "no" or "yes" to whether they believed their institution had been fairly treated, financially, in the past five years. Of the 19 variables measuring the perceived impact of financial constraint, 17 were identified as having significant differences. Respondents who believed their institutions had not been fairly treated, financially, in the past five years agreed more strongly than did respondents who believed their institutions had been fairly treated, financially, in the past five years that faculty viewed financial constraint as a significant problem, that they individually viewed financial constraint as a significant problem and that financial constraint would probably last at least another three years. Respondents who believed their institutions had not been fairly treated, financially, in the past five years disagreed more strongly than did respondents who

TABLE 4.16

PERCEIVED IMPACT OF FINANCIAL CONSTRAINT BY FAIR FINANCIAL TREATMENT OF THE INSTITUTION IN THE PAST FIVE YEARS

ITEM	NO MEAN (N=969)	YES MEAN (N=412)	*t* VALUE*
SECTION A			
21. Faculty perceive F.C. as a significant problem.	4.40	3.81	11.9
22. I view F.C. as a significant problem.	4.43	3.50	16.9
23. F.C. will last three more years.	3.98	3.64	5.9
24. Gov't will increase funding by more than inflation next year.	2.08	2.38	-5.0
SECTION B			
25. Impact of F.C. on quality of instruction.	2.03	2.49	-10.6
26. Impact of F.C. on faculty morale.	1.68	2.14	-10.4
27. Impact of F.C. on socio-economic status.	2.05	2.45	-9.7
28. Impact of F.C. on faculty career aspirations.	2.18	2.52	-7.6
29. Impact of F.C. on efficient use of resources.	2.49	2.84	-6.2
30. Impact of F.C. on effectiveness of academic staff.	2.21	2.57	-8.2

TABLE 4.16 (Concluded)

PERCEIVED IMPACT OF FINANCIAL CONSTRAINT BY FAIR FINANCIAL TREATMENT OF THE INSTITUTION IN THE PAST FIVE YEARS

ITEM	NO MEAN (N=969)	YES MEAN (N=412)	*t* VALUE*
SECTION B			
31. Impact of F.C. on consideration of priorities.	2.23	2.68	-8.3
SECTION C			
32. Impact of F.C. on my quality of instruction.	2.34	2.65	-7.2
33. Impact of F.C. on my morale.	1.97	2.46	-10.6
34. Impact of F.C. on my socio-economic status.	2.11	2.49	-8.1
35. Impact of F.C. on my career aspirations.	2.33	2.62	-6.1
SECTION D			
36. Impact of F.C. on voluntary activities.	2.58	2.72	-2.9
37. Impact of F.C. on my voluntary activities.	2.61	2.79	-3.7

F.C. = Financial Constraint
*Significant at the 0.05 level.
Ns reported are maximums.
In Section A, the scale is as follows: 1 = strongly disagree; 2 = disagree; 3 = neutral/uncertain; 4 = agree; 5 = strongly agree.
In Section B, the scale is as follows: 1 = very negative; 2 = negative; 3 = neutral/uncertain; 4 = positive; 5 = very positive.
In Section D, the scale is as follows: 1 = decrease greatly; 2 = decrease; 3 = have no effect on; 4 = increase; 5 = increase greatly.

believed their institutions had been fairly treated, financially, in the past five years that government would probably increase the funding next year by more than the rate of inflation. Respondents who believed their institutions had not been fairly treated, financially, in the past five years reported a significantly more negative impact on the quality of instruction, on faculty morale, on the socio-economic status of faculty, on the achievement of faculty career aspirations, on the efficient use of resources, on the overall effectiveness of academic staff, on the consideration of priorities, on their individual quality of instruction, on their individual morale, on their individual socio-economic status and on the achievement of their individual career aspirations than did respondents who believed their institutions had been fairly treated, financially, in the past five year. Respondents who believed their institutions had not been fairly treated, financially, in the past five years reported significantly more decrease in voluntary service activities than did respondents who believed their institutions had been fairly treated, financially, in the past five years.

Overall, respondents who believed their institutions had not been fairly treated, financially, in the past five years were much more negative about the impact of financial constraint than were respondents who believed their institution had been fairly treated, financially, in the past five years.

Responses by Fair Financial Treatment of the Department

Table 4.17 reports the significant differences identified in *t* tests of the perceived impact of financial constraint classified by fair financial treatment of the department in the past five years. Respondents were asked to respond "no" or "yes" to whether they believed their department had been fairly treated, financially, in the past five years. Of the 19 variables measuring the perceived impact of financial constraint, 17 were identified as having significant differences. Respondents who believed their departments had not been fairly treated, financially, in the past five years agreed more strongly than did respondents who believed their departments had been fairly treated, financially, in the past five years that faculty viewed financial constraint as a significant problem, that they individually viewed financial constraint as a significant problem and that financial constraint would probably last at least another three years. Respondents who believed their departments had not been fairly treated, financially, in the past five years disagreed more strongly than respondents who believed their departments had been fairly treated, financially, in the past five years that government would probably increase the funding next year by more than the rate of inflation. Respondents who believed their departments had not been fairly treated, financially, in the past five years reported a significantly more negative impact on the quality of instruction, on faculty morale, on the socio-

TABLE 4.17

PERCEIVED IMPACT OF FINANCIAL CONSTRAINT BY FAIR FINANCIAL TREATMENT OF THE DEPARTMENT IN THE PAST FIVE YEARS

ITEM	NO MEAN (N=914)	YES MEAN (N=486)	*t* VALUE*
SECTION A			
21. Faculty perceive F.C. as a significant problem.	4.36	3.93	9.0
22. I view F.C. as a significant problem.	4.36	3.72	12.1
23. F.C. will last three more years.	3.96	3.69	4.9
24. Gov't will increase funding by more than inflation next year.	2.10	2.30	-3.3
SECTION B			
25. Impact of F.C. on quality of instruction.	2.04	2.40	-8.7
26. Impact of F.C. on faculty morale.	1.69	2.08	-9.0
27. Impact of F.C. on socio-economic status.	2.08	2.33	-6.0
28. Impact of F.C. on faculty career aspirations.	2.20	2.46	-6.1
29. Impact of F.C. on efficient use of resources.	2.49	2.81	-6.1
30. Impact of F.C. on effectiveness of academic staff.	2.22	2.52	-7.2

TABLE 4.17 (Concluded)

PERCEIVED IMPACT OF FINANCIAL CONSTRAINT BY FAIR FINANCIAL TREATMENT OF THE DEPARTMENT IN THE PAST FIVE YEARS

ITEM	NO MEAN (N=914)	YES MEAN (N=486)	*t* VALUE*
SECTION B			
31. Impact of F.C. on consideration of priorities.	2.22	2.64	-8.0
SECTION C			
32. Impact of F.C. on my quality of instruction.	2.31	2.67	-9.0
33. Impact of F.C. on my morale.	1.96	2.43	-10.8
34. Impact of F.C. on my socio-economic status.	2.13	2.41	-6.3
35. Impact of F.C. on my career aspirations.	2.31	2.61	-6.6
SECTION D			
36. Impact of F.C. on voluntary activities.	2.57	2.72	-3.0
37. Impact of F.C. on my voluntary activities.	2.61	2.78	-3.9

F.C. = Financial Constraint
*Significant at the 0.05 level.
Ns reported are maximums.
In Section A, the scale is as follows: 1 = strongly disagree; 2 = disagree; 3 = neutral/uncertain; 4 = agree; 5 = strongly agree.
In Section B, the scale is as follows: 1 = very negative; 2 = negative; 3 = neutral/uncertain; 4 = positive; 5 = very positive.
In Section D, the scale is as follows: 1 = decrease greatly; 2 = decrease; 3 = have no effect on; 4 = increase; 5 = increase greatly.

economic status of faculty, on the achievement of faculty career aspirations, on the efficient use of resources, on the overall effectiveness of academic staff, on the consideration of priorities, on their individual quality of instruction, on their individual morale, on their individual socio-economic status and on the achievement of their individual career aspirations than did respondents who believed their departments had been fairly treated, financially, in the past five years. Respondents who believed their departments had not been fairly treated, financially, in the past five years reported significantly more decrease in voluntary service activities than did respondents who believed their departments had been fairly treated, financially, in the past five years.

Overall, respondents who believed their departments had not been fairly treated, financially, in the past five years were much more negative about the impact of financial constraint than were respondents who believed their departments had been fairly treated, financially, in the past five years.

Responses by Institutional Accumulated Operating Budget Surplus

Table 4.18 reports the significant differences identified in the *t* tests of the perceived impact of financial constraint classified by institutional accumulated operating budget surplus. Respondents were asked to respond "no" or "yes" to whether they believed their institution currently had a substantial accumulated surplus in its operating budget. Of the 19

TABLE 4.18

PERCEIVED IMPACT OF FINANCIAL CONSTRAINT BY INSTITUTIONAL ACCUMULATED OPERATING BUDGET SURPLUS

ITEM	NO MEAN (N=1174)	YES MEAN (N=213)	*t* VALUE*
SECTION A			
22. I view F.C. as a significant problem.	4.17	4.01	2.3
23. F.C. will last 3 more years.	3.90	3.70	2.8
24. Gov't will increase funding by more than inflation next year.	2.13	2.40	-3.4
SECTION B			
31. Impact of F.C. on consideration of priorities.	2.40	2.23	2.4

F.C. = Financial Constraint
*Significant at the 0.05 level.
Ns reported are maximums.
In Section A, the scale is as follows: 1 = strongly disagree; 2 = disagree; 3 = neutral/uncertain; 4 = agree; 5 = strongly agree.
In Section B, the scale is as follows: 1 = very negative; 2 = negative; 3 = neutral/uncertain; 4 = positive; 5 = very positive.

variables measuring the perceived impact of financial constraint, four were identified as having significant differences. Respondents who believed their institutions did not have a substantial accumulated surplus in their operating budgets agreed more strongly than did respondents who believed their institutions did have a substantial accumulated surplus in their operating budgets that they individually viewed financial constraint as a significant problem and that financial constraint will probably last at least another three years. Respondents who believed their institutions did not have a substantial accumulated surplus in their operating budgets disagreed more strongly than did respondents who believed their institutions did have a substantial accumulated surplus in their operating budgets that government would probably increase the funding next year by more than the rate of inflation. Respondents who believed their institutions did have a substantial accumulated surplus in their operating budgets reported a significantly more negative impact on the consideration of priorities at their institutions than did respondents who believed their institutions did not have a substantial accumulated surplus in their operating budgets. Generally, the perceived impact of financial constraint varied little by whether or not the respondents believed their institutions had a substantial accumulated surplus in their operating budgets.

Responses by Support of Institutional Mission

Table 4.19 reports the significant differences identified in the one-way analysis of variance of the perceived impact of financial constraint classified by support of institutional mission. Respondents used a five-point scale on which 1 = "strongly disagree" and 5 = "strongly agree" to indicate their support for the mission of their institution. Since only 2.6 percent of the respondents "strongly disagreed" and only 3.6 percent "disagreed,"these two groups were combined for purposes of analyzing the data. Of the 19 variables measuring the perceived impact of financial constraint, nine were identified as having significant differences. Respondents who "strongly disagreed" or "disagreed" with the missions of their institutions reported a significantly more negative impact on faculty morale, on the socio-economic status of faculty, on the efficient use of resources, on the overall effectiveness of academic staff, on the consideration of priorities and on their individual morale than did respondents who "agreed" or "strongly agreed" with the missions of their institutions. Respondents who "strongly disagreed" or "disagreed" with the missions of their institutions also reported a significantly more negative impact on the achievement of faculty career aspirations and on the achievement of their individual career aspirations than did respondents who "strongly agreed" with the missions of their institutions. Respondents who "strongly disagreed" or "disagreed" with the missions of

TABLE 4.19

PERCEIVED IMPACT OF FINANCIAL CONSTRAINT BY SUPPORT OF THE MISSION OF THE INSTITUTION

	MEANS							
ITEM	Overall	G1	G2	G3	G4	G5	F Prob.	Intergroup Differences
SECTION B								
26. Impact of F.C. on faculty morale.	1.84	--	1.60	1.80	1.86	1.87	0.02	5>2, 4>2
27. Impact of F.C. on socio-economic status.	2.17	--	1.95	2.19	2.20	2.18	0.04	4>2, 5>2
28. Impact of F.C. on faculty career aspirations.	2.29	--	2.10	2.28	2.28	2.36	0.02	5>2
29. Impact of F.C. on efficient use of resources.	2.61	--	2.28	2.50	2.63	2.67	0.00	5>2, 4>2
30. Impact of F.C. on effectiveness of academic staff.	2.33	--	2.05	2.30	2.34	2.37	0.00	5>2, 4>2, 3>2
31. Impact of F.C. on consideration of priorities.	2.38	--	2.08	2.23	2.40	2.47	0.00	5>2, 5>3, 4>2
SECTION C								
33. Impact of F.C. on my morale.	2.14	--	1.91	2.02	2.18	2.17	0.00	4>2, 5>2
35. Impact of F.C. on my career aspirations.	2.42	--	2.20	2.37	2.43	2.47	0.04	5>2

TABLE 4.19 (Concluded)

PERCEIVED IMPACT OF FINANCIAL CONSTRAINT BY SUPPORT OF THE MISSION OF THE INSTITUTION

ITEM	MEANS							Intergroup Differences
	Overall	G1	G2	G3	G4	G5	F Prob.	
SECTION D								
39. Impact of F.C. on my outside employment.	3.39	--	3.46	3.50	3.38	3.34	0.04	3>5

F.C. = Financial Constraint

G2 = strongly disagree or disagree; G3 = neutral/uncertain; G4 = agree; G5 = strongly agree.

In Sections B&C, the scale is as follows: 1 = very negative; 2 = negative; 3 = neutral/uncertain; 4 = positive; 5 = very positive.
In Section D, the scale is as follows: 1 = decrease greatly; 2 = decrease; 3 = have no effect on; 4 = increase; 5 = increase greatly.

their institutions also reported a significantly more negative impact on the overall effectiveness of academic staff than did respondents who were "neutral/uncertain" about their support for the missions of their institutions. Respondents who were "neutral/uncertain" about their support for the missions of their institutions reported a significantly more negative impact on the consideration of priorities than did respondents who "strongly agreed" with the missions of their institutions. Respondents who were "neutral/uncertain" about their support for the missions of their institutions also reported significantly more increase in their individual outside employment than did respondents who "strongly agreed" with the missions of their institutions.

Overall, respondents who "strongly disagreed" or "disagreed" with the missions of their institutions were much more negative about the impact of financial constraint than did respondents who "strongly agreed" or "agreed" with the mission of their institutions. Only 6.2 percent of the respondents "strongly disagreed" or "disagreed," whereas 80.9 percent of the respondents reported they "strongly agreed" or "agreed" with the missions of their institutions.

Responses by President's Support of Institutional Mission

Table 4.20 reports the significant differences in the one-way analysis of variance of the perceived impact of financial constraint classified by President's support of institutional mission. Respondents

TABLE 4.20

PERCEIVED IMPACT OF FINANCIAL CONSTRAINT BY THE PRESIDENT'S SUPPORT OF THE MISSION OF THE INSTITUTION

	MEANS							
ITEM	Overall	G1	G2	G3	G4	G5	F Prob.	Intergroup Differences
SECTION B								
26. Impact of F.C. on faculty morale.	1.84	--	1.51	1.72	1.89	1.92	0.00	5›2, 5›3, 4›2, 4›3
27. Impact of F.C. on socio-economic status.	2.17	--	1.99	2.19	2.16	2.23	0.03	5›2
29. Impact of F.C. on efficient use of resources.	2.60	--	2.32	2.52	2.62	2.71	0.00	5›2, 5›3, 4›2
30. Impact of F.C. on effectiveness of academic staff.	2.33	--	2.12	2.35	2.31	2.38	0.01	5›2, 3›2
31. Impact of F.C. on consideration of priorities.	2.38	--	2.00	2.30	2.39	2.53	0.00	5›2, 5›3, 4›2, 3›2
SECTION C								
32. Impact of F.C. on my quality of instruction.	2.44	--	2.26	2.41	2.44	2.51	0.02	5›2
33. Impact of F.C. on my morale.	2.14	--	1.94	2.03	2.17	2.21	0.00	5›2, 5›3, 4›2, 4›3

F.C. = Financial Constraint

G2 = strongly disagree or disagree; G3 = neutral/uncertain; G4 = agree; G5 = strongly agree.

In Sections B&C, the scale is as follows: 1 = very negative; 2 = negative; 3 = neutral/uncertain; 4 = positive; 5 = very positive.

used a five-point scale on which 1 = "strongly disagree" and 5 = "strongly agree" to indicate their perceptions of the President's support of the mission of their institutions. Since only 3.2 percent of the respondents "strongly disagreed" and only 4.4 percent "disagreed," these two groups were combined for purposes of analyzing the data. Of the 19 variables measuring the perceived impact of financial constraint, seven were identified as having significant differences. Respondents who "strongly disagreed," "disagreed" or were "neutral/uncertain" that their Presidents support the missions of their institutions reported a significantly more negative impact on faculty morale and on their individual morale than did respondents who "strongly agreed" or "agreed" that their Presidents support the mission of their institutions. Respondents who "strongly disagreed" or "disagreed" that their Presidents support the mission of their institutions also reported a significantly more negative impact on the socio-economic status of faculty, on the efficient use of resources, on the overall effectiveness of academic staff, on the consideration of priorities and on their individual quality of instruction than did respondents who "strongly agreed" that their Presidents support the mission of their institutions. Respondents who were "neutral/uncertain" that their Presidents support the mission of their institutions reported a significantly more negative impact on the efficient use of resources and on the consideration of priorities than did respondents who "strongly agreed" that their Presidents support the mission of their institutions. Respondents who "strongly disagreed" or "disagreed" that their Presidents support the mission of their institutions also reported a significantly more negative impact on the efficient use of resources and on the consideration of priorities than did respondents who "agreed" that their Presidents support the missions of their institutions. Respondents who "strongly disagreed" or "disagreed" that their Presidents support the mission of their institutions also reported a significantly more negative impact on the overall effectiveness of academic staff and on the consideration of priorities than did respondents who were "neutral/uncertain" that their Presidents support the missions of their institutions.

Overall, respondents who "strongly disagreed" or "disagreed" that their Presidents support the mission of their institutions were much more negative about the perceived impact of financial constraint than were respondents who "strongly agreed" or "agreed" that their Presidents support the missions of their institutions. Only 7.6 percent of the respondents reported that they "strongly disagreed" or "disagreed," whereas 72.2 percent reported that they "strongly agreed" or "agreed" that their Presidents support the mission of their institutions.

Responses by Confidence in the President to Effectively Manage Financial Constraint

Table 4.21 reports the significant differences in the one-way analysis of variance of the perceived impact of financial constraint classified by confidence in the President to effectively manage financial constraint. Respondents used a five-point scale on which 1 = "strongly disagree" and 5 = "strongly agree" to indicate their confidence in the Presidents of their institutions to effectively manage financial constraint. Of the 19 variables measuring the perceived impact of financial constraint, 17 were identified as having significant differences. Respondents who "strongly disagreed" that their Presidents could effectively manage financial constraint agreed more strongly than did respondents who "strongly agreed" or "agreed" that their Presidents could effectively manage financial constraint that faculty viewed financial constraint as a significant problem, that they individually viewed financial constraint as a significant problem and that financial constraint would last at least another three years. Respondents who "disagreed" that their Presidents could effectively manage financial constraint agreed more strongly than did respondents who "agreed" that their Presidents could effectively manage financial constraint that they individually viewed financial constraint as a significant problem and that financial constraint would last at least another three years. Respondents who were "neutral/uncertain" that their Presidents could effectively manage

TABLE 4.21

PERCEIVED IMPACT OF FINANCIAL CONSTRAINT BY CONFIDENCE IN THE PRESIDENT TO EFFECTIVELY MANAGE FINANCIAL CONSTRAINT

ITEM	MEANS							Intergroup Differences
	Overall	G1	G2	G3	G4	G5	F Prob.	
SECTION A								
21. Faculty perceive F.C. as a significant problem.	4.21	4.40	4.24	4.28	4.10	4.11	0.00	1›4, 1›5, 3›4
22. I view F.C. as a significant problem.	4.14	4.39	4.27	4.19	4.00	3.99	0.00	1›5, 1›4, 2›4, 3›4
23. F.C. will last three more years.	3.86	4.14	3.97	3.90	3.74	3.77	0.00	1›4, 1›5, 2›4
SECTION B								
25. Impact of F.C. on quality of instruction.	2.17	1.94	2.10	2.11	2.29	2.33	0.00	5›1, 5›2, 5›3,4›1, 4›2, 4›3
26. Impact of F.C. on faculty morale.	1.88	1.53	1.64	1.76	2.01	2.03	0.00	5›1, 5›2, 5›3,4›1, 4›2, 4›3, 3›1
27. Impact of F.C. on socio-economic status.	2.18	1.87	2.02	2.13	2.32	2.32	0.00	4›1, 4›2, 4›3, 5›1, 5›2, 3›1
28. Impact of F.C. on faculty career aspirations.	2.29	2.06	2.15	2.28	2.40	2.36	0.00	4›1, 4›2, 5›1, 3›1
29. Impact of F.C. on efficient use of resources.	2.61	2.31	2.35	2.54	2.80	2.82	0.00	5›1, 5›2, 5›3, 4›1, 4›2, 4›3
30. Impact of F.C. on effectiveness of academic staff.	2.33	2.07	2.19	2.29	2.43	2.50	0.00	5›1, 5›2, 5›3, 4›1, 4›2, 4›3, 3›1

TABLE 4.21 (Continued)

PERCEIVED IMPACT OF FINANCIAL CONSTRAINT BY CONFIDENCE IN THE PRESIDENT TO EFFECTIVELY MANAGE FINANCIAL CONSTRAINT

ITEM	MEANS							Intergroup Differences
	Overall	G1	G2	G3	G4	G5	F Prob.	
SECTION B								
31. Impact of F.C. on consideration of priorities.	2.38	1.93	2.02	2.39	2.55	2.70	0.00	5›1, 5›2, 5›3, 4›1, 4›2, 3›1, 3›2
SECTION C								
32. Impact of F.C. on my quality of instruction.	2.44	2.26	2.28	2.41	2.52	2.62	0.00	5›1, 5›2, 5›3, 4›1, 4›2
33. Impact of F.C. on my morale.	2.13	1.77	1.94	2.06	2.31	2.38	0.00	5›1, 5›2, 5›3, 4›1, 4›2, 4›3, 3›1
34. Impact of F.C. on my socio-economic status.	2.23	1.98	2.09	2.15	2.39	2.38	0.00	4›1, 4›2, 4›3, 5›1, 5›2, 5›3
35. Impact of F.C. on my career aspirations.	2.42	2.14	2.28	2.40	2.52	2.60	0.00	5›1, 5›2, 4›1, 4›2, 3›1
SECTION D								
36. Impact of F.C. on voluntary activities.	2.62	2.48	2.48	2.59	2.71	2.76	0.00	5›2, 4›2
37. Impact of F.C. on my voluntary activities.	2.67	2.39	2.46	2.65	2.79	2.83	0.00	5›1, 5›2, 4›1, 4›2, 3›1
39. Impact of F.C. on my outside employment.	3.39	3.55	3.44	3.43	3.33	3.24	0.00	1›5, 1›4, 3›5

TABLE 4.21 (Concluded)

PERCEIVED IMPACT OF FINANCIAL CONSTRAINT BY CONFIDENCE IN THE PRESIDENT TO EFFECTIVELY MANAGE FINANCIAL CONSTRAINT

F.C. = Financial Constraint

G1 = strongly disagree; G2 = disagree; G3 = neutral/uncertain; G$ = agree; G5 = strongly agree.

In Section A, the scale for items 21 to 24 is as follows: 1 = strongly disagree; 2 = disagree; 3 = neutral/uncertain; 4 = agree; 5 = strongly agree.
In Sections B&C, the scale for items 25 to 35 is as follows: 1 = very negative; 2 = negative; 3 = neutral/uncertain; 4 = positive; 5 = very positive.
In Section D, the scale for items 36 to 39 is as follows: 1 = decrease greatly; 2 = decrease; 3 = have no effect on; 4 = increase; 5 = increase greatly.

financial constraint agreed more strongly than did respondents who "agreed" that their Presidents could effectively manage financial constraint that faculty viewed financial constraint as a significant problem and that they individually viewed financial constraint as a significant problem. Respondents who "strongly disagreed," "disagreed" or were "neutral/uncertain" that their Presidents could effectively manage financial constraint reported a significantly more negative impact on the quality of instruction, on faculty morale, on the efficient use of resources, on the overall effectiveness of academic staff, on their individual morale and on their individual socio-economic status than did respondents who "strongly agreed" or "agreed" that their Presidents could effectively manage financial constraint. Respondents who "strongly disagreed" or "disagreed" that their presidents could effectively manage financial constraint reported a significantly more negative impact on the socio-economic status of faculty, on the consideration of priorities, on their individual quality of instruction and on the achievement of their individual career aspirations than did respondents who "strongly agreed" or "agreed" that their Presidents could effectively manage financial constraint. Respondents who "strongly disagreed" that their Presidents could effectively manage financial constraint also reported a significantly more negative impact on the achievement of faculty career aspirations than did respondents who "strongly agreed" that their Presidents could effectively manage financial constraint. Respondents who "strongly disagreed" or "disagreed" that their Presidents could effectively manage financial constraint also reported a significantly more negative impact on the achievement of faculty career aspirations than did respondents who "agreed" that their Presidents could effectively manage financial constraint. Respondents who "strongly disagreed" that their Presidents could effectively manage financial constraint also reported a significantly more negative impact on the socio-economic status of faculty, on the achievement of faculty career aspirations, on the overall effectiveness of academic staff, on the consideration of priorities, on their individual morale and on the achievement of their individual career aspirations than did respondents who were "neutral/uncertain" that their Presidents could effectively manage financial constraint. Respondents who were "neutral/uncertain" that their Presidents could effectively manage financial constraint reported a significantly more negative impact on the socio-economic status of faculty than did respondents who "agreed" that their Presidents could effectively manage financial constraint. Respondents who were "neutral/uncertain" that their Presidents could effectively manage financial constraint reported a significantly more negative impact on the consideration of priorities and on their individual quality of instruction than did respondents who "strongly agreed" that their Presidents could effectively manage financial constraint. Respondents who "disagreed" that their Presidents could effectively manage financial constraint reported a significantly more negative impact on the consideration of priorities than did respondents who were "neutral/ uncertain" that their Presidents could effectively manage financial constraint. Respondents who "disagreed" that their Presidents could effectively manage financial constraint reported significantly more decrease in their voluntary service activities and their individual voluntary service activities than did respondents who "strongly agreed" or "agreed" that their Presidents could effectively manage financial constraint. Respondents who "strongly disagreed" that their Presidents could effectively manage financial constraint reported significantly more decrease in their individual voluntary service activities than did respondents who "strongly agreed," "agreed" or were "neutral/uncertain" that their Presidents could effectively manage financial constraint. Respondents who "strongly disagreed" that their Presidents could effectively manage financial constraint reported significantly more increase in their individual outside employment than did respondents who "strongly agreed" or "agreed" that their Presidents could effectively manage financial constraint. Respondents who were "neutral/uncertain" that their Presidents could effectively manage financial constraint reported significantly more increase in their individual outside employment than did respondents who "strongly agreed" that their

Presidents could effectively manage financial constraint.

Overall, respondents who "strongly disagreed" or "disagreed" that their Presidents could effectively manage financial constraint were much more negative about the perceived impact of financial constraint than were respondents who "strongly agreed" or "agreed" that their Presidents could effectively manage financial constraint. There were 23.0 percent of the respondents that reported that they "strongly disagreed" or "disagreed," whereas 43.2 percent of the respondents "strongly agreed" or "agreed" that their Presidents could effectively manage financial constraint.

Faculty Members in General and Individually

Matched pairs *t* tests were performed on the means of seven pairs of items in Part II of the questionnaire. The pairs included the following items: (1) 21 and 22 (on financial constraint as a significant problem); (2) 25 and 32 (on the quality of instruction); (3) 26 and 33 (on morale); (4) 27 and 34 (on socio-economic status); (5) 28 and 35 (on the achievement of career aspirations); (6) 36 and 37 (on voluntary service activities); and (7) 38 and 39 (on outside employment). Table 4.22 reports *t* tests of the perceived impact of financial constraint on faculty members in general and on individual respondents. Significant differences were identified in six of the seven pairs of parallel statements at the 0.001 level and in the seventh pair of parallel statements at the 0.02 level. Financial constraint

TABLE 4.22

T TESTS OF THE PERCEIVED IMPACT OF FINANCIAL CONSTRAINT ON FACULTY MEMBERS IN GENERAL AND ON INDIVIDUAL FACULTY MEMBERS

ITEM	MEAN	SD	t VALUE	N
SECTION A				
21. Faculty generally perceive financial constraint at my institution as a significant problem.	4.21	0.85	4.42*	1437
22. I view financial constraint at my institution as a significant problem.	4.13	0.95		
SECTIONS B&C				
25. The impact of F.C. at my institution on the quality of instruction is generally ________.	2.18	0.76	-13.09*	1415
32. The impact of F.C. at my institution on the quality of instruction that I am able to provide is ________.	2.44	0.74		
26. The impact of F.C. at my institution on faculty morale is generally ________.	1.84	0.79	-14.69*	1429
33. The impact of F.C. at my institution on **my** morale is ________.	2.13	0.80		
27. The impact of F.C. at my institution on the socio_economic status of faculty is generally ________.	2.18	0.76	-3.37*	1425
34. The impact of F.C. at my institution on **my** socio_economic status is ________.	2.23	0.80		

TABLE 4.22 (Concluded)

T TESTS OF THE PERCEIVED IMPACT OF FINANCIAL CONSTRAINT ON FACULTY MEMBERS IN GENERAL AND ON INDIVIDUAL FACULTY MEMBERS

ITEM	MEAN	SD	t VALUE	N
SECTIONS B&C				
28. The impact of F.C. at my institution on the achievement of faculty career aspirations is generally ________.	2.29	0.76	-11.02*	1424
35. The impact of F.C. at my institution on the achievement of my career aspirations is ________.	2.42	0.82		
SECTION D				
36. The impact of F.C. at my institution is generally to ________ voluntary service activities (e.g. committee service, community service).	2.62	0.88	-2.42	1400
37. The impact of F.C. at my institution is to ________ my voluntary service activities (e.g. committee service, community service).	2.67	0.88		
38. The impact of F.C. on faculty at my institution is generally to ________ their outside employment.	3.51	0.70	6.78*	1364
39. The impact of F.C. at my institution is to ________ my outside employment.	3.39	0.69		

F.C. = Financial Constraint

*Significant at the 0.01 level.

In Section A, the scale is as follows: 1 = strongly disagree; 2 = disagree; 3 = neutral/uncertain; 4 = agree; 5 = strongly agree.

In Sections B&C, the scale is as follows: 1 = very negative; 2 = negative; 3 = neutral/uncertain; 4 = positive; 5 = very positive.

In Section D, the scale is as follows: 1 = decrease greatly; 2 = decrease; 3 = have no effect on; 4 = increase; 5 = increase greatly.

was viewed by respondents to be more of a problem for faculty in general than for themselves as individuals. In comparison with the impact on themselves as individuals, respondents perceived faculty in general as experiencing significantly more negative impact on the quality of instruction, on morale, on socio-economic status and on the achievement of career aspirations. Respondents perceived faculty in general as adjusting to financial constraint more extremely by decreasing voluntary service activities and increasing outside employment compared to themselves as individuals.

There were persistent differences in the perceived impact of financial constraint upon faculty members in general and on respondents as individuals. Financial constraint was perceived to have more extreme impact on faculty in general than on the individual respondents. Hence, to some extent, the perceived impact of financial constraint may be exaggerated in its effect on faculty in general.

The Acceptability in Principle of Measures for Dealing with Financial Constraint

Table 4.23 reports the means and rank ordering of responses of 65 measures according to their acceptability in principle for dealing with financial constraint. Of the 65 items, 13 items were rated between very acceptable (5) and acceptable (4); 25 items were rated between acceptable (4) and neutral/uncertain (3); 22 items were rated between neutral/

TABLE 4.23

RANK ORDERING OF MEASURES ACCORDING TO ACCEPTABILITY IN PRINCIPLE FOR DEALING WITH FINANCIAL CONSTRAINT

RANK ORDER	ITEM		MEAN	SD	N
1	43.	That the institution lobby government for more favourable funding arrangements.	4.43	0.80	1413
2	67.	That the institution establish clear guidelines for discontinuing programs.	4.33	0.70	1410
3	72.	That the institution develop new programs in the high-demand areas.	4.32	0.66	1409
4	73.	That the institution expand current programs in high-demand areas.	4.30	0.68	1410
5	84.	That the institution utilize energy conservation measures (e.g. electricity).	4.25	0.76	1407
6	45.	That the institution actively encourage support groups to lobby various constituencies on behalf of the college or technical institute.	4.17	0.86	1412
7	75.	That the institution undertake more programs in cooperation with business and industry.	4.13	0.77	1410
8	40.	That the institution involve faculty members in the formation of measures to deal with financial constraint.	4.11	0.93	1412
9	52.	That the institution provide incentives for the retraining of faculty members for high-demand areas within the college or technical institute.	4.09	0.88	1411

TABLE 4.23 (Continued)

RANK ORDERING OF MEASURES ACCORDING TO ACCEPTABILITY IN PRINCIPLE FOR DEALING WITH FINANCIAL CONSTRAINT

RANK ORDER	ITEM	MEAN	SD	N
10	63. That the institution establish clear guidelines regarding the process of termination of employment of redundant faculty members.	4.08	0.95	1408
11	76. That the institution enter into arrangements with other colleges or technical institutes in the delivery of programs.	4.05	0.77	1408
12	90. That the institution reduce the number of administrators.	4.04	0.98	1405
13	77. That the institution strive to recruit students in programs in which its enrollment is below capacity.	4.02	0.84	1401
14	85. That the institution utilize utility conservation measures (e.g. telephones).	3.95	0.93	1405
15	46. That the institution utilize publicity campaigns in order to enhance the legitimacy of its activities.	3.94	0.91	1411
16	79. That the institution increase its effort at fund raising from private benefactors.	3.93	0.86	1408
17	49. That the institution provide incentives for the early retirement of faculty members.	3.86	1.04	1415
18	41. That the institution review its mission as a preliminary step to taking action to deal with financial constraint.	3.83	0.98	1403

TABLE 4.23 (Continued)

RANK ORDERING OF MEASURES ACCORDING TO ACCEPTABILITY IN PRINCIPLE FOR DEALING WITH FINANCIAL CONSTRAINT

RANK ORDER	ITEM	MEAN	SD	N
19	88. That the institution establish procedures to reallocate internal resources on a priority basis.	3.82	0.73	1395
20	42. That the institution establish a task force to identify various measures to deal with financial constraint.	3.78	0.94	1403
21	51. That the institution make it easier for faculty members to obtain voluntary leave without pay.	3.72	0.97	1415
22	48. That the institution align its programs more closely with Canada's employment needs.	3.72	1.00	1410
23	71. That the institution merge related departments.	3.70	0.81	1404
24	74. That the institution enhance its reputation by developing programs of greatest academic potential.	3.66	0.95	1401
25	95. That the institution require food services to become self- supporting.	3.63	0.97	1395
26	68. That the institution utilize program evaluations as a means of determining the priority of programs.	3.62	0.97	1399
27	96. That the institution require student housing to become self-supporting.	3.54	0.95	1342

TABLE 4.23 (Continued)

RANK ORDERING OF MEASURES ACCORDING TO ACCEPTABILITY IN PRINCIPLE FOR DEALING WITH FINANCIAL CONSTRAINT

RANK ORDER	ITEM		MEAN	SD	N
28	65.	That the institution base employment terminations of faculty members deemed redundant on the basis of their qualifications for the remaining programs.	3.50	1.01	1402
29	61.	That the institution terminate the employment of temporary academic staff deemed redundant, after attempting reassignment.	3.36	1.05	1414
30	66.	That the institution base employment terminations of faculty members deemed redundant on faculty performance evaluations.	3.27	1.11	1394
31	69.	That the institution discontinue academic programs of low priority.	3.26	0.97	1390
32	78.	That the institution raise admission standards.	3.24	0.99	1403
33	87.	That the institution cut budgets in selected areas only.	3.20	1.01	1398
34	70.	That the institutions close departments of low priority.	3.16	0.96	1387
35	80.	That the institution increase tuition fees.	3.11	1.01	1408
36	102.	That the institution defer the improvements of grounds.	3.05	1.02	1400
37	93.	That the institution reduce budget allocations for the accounting office.	3.04	0.90	1407

TABLE 4.23 (Continued)

RANK ORDERING OF MEASURES ACCORDING TO ACCEPTABILITY IN PRINCIPLE FOR DEALING WITH FINANCIAL CONSTRAINT

RANK ORDER	ITEM		MEAN	SD	N
38	62.	That the institution terminate the employment of permanent faculty members deemed redundant, after attempting reassignment.	3.00	1.15	1407
39.5	64.	That the institution base employment terminations of faculty members deemed redundant on seniority.	2.98	1.25	1406
39.5	81.	That the institution increase charges for student computing services.	2.98	0.91	1401
41	44.	That the institution threaten to reduce its academic programs unless adequate funding is forthcoming.	2.97	1.28	1407
42	53.	That the institution provide incentives for faculty members to resign from the institution.	2.91	1.15	1404
43	92.	That the institution reduce budget allocations for the registrar's office.	2.80	0.92	1404
44	82.	That the institution sell some of its assets.	2.77	0.97	1401
45	101.	That the institution reduce budget allocations for faculty members' travel.	2.74	1.04	1401
46	86.	That the institution cut budgets by the same percentage for all departments.	2.71	1.09	1407

TABLE 4.23 (Continued)

RANK ORDERING OF MEASURES ACCORDING TO ACCEPTABILITY IN PRINCIPLE FOR DEALING WITH FINANCIAL CONSTRAINT

RANK ORDER	ITEM		MEAN	SD	N
47	89.	That the institution reduce budget allocations for non-academic staff.	2.67	1.00	1401
48	100.	That the institution reduce budget allocations for faculty members' academic computing services.	2.59	0.92	1392
49	47.	That the institution take significant financial risks when dealing with financial constraint.	2.58	1.00	1403
50	83.	That the institution incur an operating deficit.	2.54	1.00	1400
51	97.	That the institution reduce budget allocations for student health services.	2.52	0.93	1376
52	91.	That the institution reduce budget allocations for secretarial support.	2.48	0.99	1405
53	94.	That the institution reduce budget allocations for student counselling services.	2.41	1.01	1404
54	50.	That the institution provide incentives for changing the full- time employment of permanent faculty members to part-time employment.	2.30	1.32	1415
55	104.	That the institution defer the purchase of new equipment.	2.28	0.96	1402

TABLE 4.23 (Concluded)

RANK ORDERING OF MEASURES ACCORDING TO ACCEPTABILITY IN PRINCIPLE FOR DEALING WITH FINANCIAL CONSTRAINT

RANK ORDER	ITEM	MEAN	SD	N
56	56. That the institution establish quotas on the number of permanent positions within each department.	2.27	1.02	1404
57	103. That the institution defer repairs and renovations to facilities.	2.25	0.92	1403
58	55. That the institution fill vacant positions with sessional appointments.	2.18	1.06	1411
59	98. That the institution reduce budget allocations for the purchase of library materials.	2.02	0.86	1406
60	99. That the institution reduce budget allocations for instructional supplies.	2.01	0.84	1408
61	54. That the institution leave vacant faculty positions unfilled.	1.98	0.91	1410
62	57. That the institution not appoint new faculty members to permanent positions.	1.95	0.95	1408
63	58. That the institution increase the average faculty teaching workload.	1.78	0.93	1407
64	59. That the institution negotiate a freeze in faculty members' salaries.	1.62	0.87	1412
65	60. That the institution negotiate a reduction in faculty members' salaries.	1.38	0.71	1411

The scale is as follows: 1 = very unacceptable; 2 = unacceptable; 3 = neutral/uncertain; 4 = acceptable; 5 = very acceptable.

uncertain (3) and unacceptable (2); and five items were rated between unacceptable (2) and very unacceptable (1). Therefore, of the 65 items, 38 were identified as acceptable or tending to be acceptable, whereas 27 items were identified as unacceptable or tending to be unacceptable.

As defined by Berger (1983, pp. 5-6), of the 13 most acceptable measures for dealing with financial constraint, 10 were substantive measures and three were process measures (40, 63, 67). (The numbers in parentheses refer to item numbers in the questionnaire.) Of the 10 substantive measures, two (43, 45) were related to lobbying for additional funds and five (72, 73, 75, 76, 77) were related to the expansion of programming, one (52) was related to the retraining of faculty, one (84) was a conservation measure and one (90) related to a reduction in administrative staff. A reduction in the number of administrators (item 90) was one of the most acceptable substantive measures.

Of the 25 measures tending to be acceptable, 16 were substantive measures and nine were process measures (41, 42, 61, 62, 65, 66, 68, 87, 88). Two of the substantive measures were related to lobbying for additional funds and the promotion of the institution's activities (46, 79). Two were voluntary alternatives to dismissal (49, 51). Five were related to program reduction or expansion (48, 69, 70, 71, 74). Four were related to ancillary services (93, 95, 96, 102) and two were related to students (78, 80).

Of the 22 measures tending to be unacceptable, 20 were substantive measures and two were process measures (64, 86). Seven of the substantive measures were related to the dismissal of personnel (89, 91, 92), the filling of vacant faculty positions (55, 56) or voluntary alternatives to dismissal (50, 53). Four were related to reductions in services provided to the faculty (98, 99, 100, 101). Three were related to services available to students (81, 94, 97). Six were related to the general financial management of the institution (44, 47, 82, 83) and a reduction in expenditure for new equipment and facilities (103, 104).

The most unacceptable measures for dealing with financial constraint were five substantive measures which were related to faculty members' salaries (59, 60), a change in faculty working conditions (58) and vacant faculty positions (54, 57).

Factor Analysis of the Acceptability in Principle of Measures for Dealing with Financial Constraint

Table 4.24 reports the varimax factor solution for the acceptability in principle of measures for dealing with financial constraint using 11 factors. These 11 factors represent a reduction from the 65 measures for dealing with financial constraint (Part III of the questionnaire). A factor loading greater than 0.40 was used as the criterion for including a given item in a given factor. No items were double loaded; ten items did not load; and a total of 55 items loaded on their respective factors. The 11

TABLE 4.24

VARIMAX FACTOR SOLUTION FOR MEASURES FOR DEALING WITH FINANCIAL CONSTRAINT USING 11 FACTORS (N = 1436)

MEASURES FOR DEALING WITH FINANCIAL CONSTRAINT	FACTORS AND FACTOR LOADINGS										
	1	2	3	4	5	6	7	8	9	10	11
59. That the institution negotiate a freeze in faculty members' salaries.	.74	.02	.15	-.01	.06	-.11	-.06	-.06	-.01	.12	-.04
60. That the institution negotiate a reduction in faculty members' salaries.	.72	-.04	.09	-.04	.00	-.13	-.11	-.06	.00	.08	-.07
55. That the institution fill vacant positions with sessional appointments.	.63	.05	.07	.06	.07	.04	.12	.12	.03	-.12	.11
57. That the institution not appoint new faculty members to permanent positions.	.62	-.06	.13	.01	.04	.03	.08	.04	.00	-.08	.07
58. That the institution increase the average faculty teaching workload.	.61	.05	.12	.02	.09	-.10	.02	.05	-.12	.03	-.09
56. That the institution establish quotas on the number of permanent positions within each department.	.54	-.01	.02	.02	.05	.08	.11	.17	.05	-.11	.14
54. That the institution leave vacant faculty positions unfilled.	.53	-.05	.19	.12	.03	-.11	.11	.06	-.01	-.10	.18

TABLE 4.24 (Continued)

VARIMAX FACTOR SOLUTION FOR MEASURES FOR DEALING WITH FINANCIAL CONSTRAINT USING 11 FACTORS (N = 1436)

MEASURES FOR DEALING WITH FINANCIAL CONSTRAINT	FACTORS AND FACTOR LOADINGS 1	2	3	4	5	6	7	8	9	10	11
73. That the institution expand current programs in high-demand areas.	-.07	.76	-.06	-.02	.03	.07	.00	.17	-.05	.02	-.02
72. That the institution develop new programs in high-demand areas.	-.09	.74	-.06	.01	.05	.05	-.02	.21	-.06	.07	-.04
75. That the institution undertake more programs in cooperation with business and industry.	.09	.74	-.04	.00	.04	.00	.17	.10	-.16	-.04	.02
76. That the institution enter into arrangements with other colleges or technical institutes in the delivery of programs.	.05	.61	.00	-.14	.09	.07	.16	.08	.05	.16	.02
48. That the institution align its programs more closely with Canada's employment needs.	.10	.55	.03	.06	-.01	.10	.01	.15	-.24	-.10	.13
77. That the institution strive to recruit students in programs in which its enrollment is below capacity.	-.09	.47	-.07	.04	.19	.05	-.02	-.25	.14	.11	.07
52. That the institution provide incentives for the retraining of faculty members for high-demand areas within the college or technical institute.	-.12	.41	.03	-.03	.16	.25	.02	-.06	.02	.11	.27
79. That the institution increase its efforts at fund-raising from private benefactors.	-.05	.40	-.09	.09	.08	.09	.35	-.08	.18	.07	.07

TABLE 4.24 (Continued)

VARIMAX FACTOR SOLUTION FOR MEASURES FOR DEALING WITH FINANCIAL CONSTRAINT USING 11 FACTORS (N = 1436)

MEASURES FOR DEALING WITH FINANCIAL CONSTRAINT	FACTORS AND FACTOR LOADINGS										
	1	2	3	4	5	6	7	8	9	10	11
104. That the institution defer the purchase of new equipment.	.15	-.10	.65	.05	.07	-.05	.01	-.02	.16	.10	.01
103. That the institution defer repairs and renovations to facilities.	.07	-.09	.63	.13	.00	-.02	.02	.05	.28	.04	-.03
99. That the institution reduce budget allocations for instructional supplies.	.15	-.08	.63	.10	-.06	-.01	.06	-.05	-.18	-.13	.10
98. That the institution reduce budget allocations for the purchase of library materials.	.11	.00	.62	.15	-.05	-.03	.05	.06	-.21	-.25	.13
101. That the institution reduce budget allocations for faculty members' travel.	.22	.03	.57	.05	.07	-.05	.07	.07	-.06	.15	-.13
100. That the institution reduce budget allocations for faculty members' academic computing services.	.20	-.02	.52	.19	.05	-.06	.05	.04	-.04	.06	.02
102. That the institution defer the improvement of grounds.	-.06	-.03	.52	.13	.11	.02	.18	.00	.30	.21	-.16

TABLE 4.24 (Continued)

VARIMAX FACTOR SOLUTION FOR MEASURES FOR DEALING WITH FINANCIAL CONSTRAINT USING 11 FACTORS (N = 1436)

MEASURES FOR DEALING WITH FINANCIAL CONSTRAINT	FACTORS AND FACTOR LOADINGS										
	1	2	3	4	5	6	7	8	9	10	11
93. That the institution reduce budget allocations for the accounting office.	.00	.05	.06	.81	.05	-.03	.03	-.01	.10	.05	.03
92. That the institution reduce budget allocations for the registrar's office.	.08	.03	.08	.81	.00	.00	.00	.02	-.04	.01	-.05
91. That the institution reduce budget allocations for secretarial support.	.10	-.01	.19	.70	.00	.00	.02	-.01	-.06	-.08	-.01
89. That the institution reduce budget allocations for non-academic staff.	-.01	-.06	.12	.62	.12	.01	.10	.11	.03	-.01	-.05
94. That the institution reduce budget allocations for student counselling services.	.04	-.07	.25	.59	-.08	-.03	.17	.03	-.15	-.08	.03
90. That the institution reduce the number of administrators.	.26	.09	.01	.46	.02	-.05	.06	.10	.13	.29	.06

TABLE 4.24 (Continued)
VARIMAX FACTOR SOLUTION FOR MEASURES FOR DEALING WITH FINANCIAL CONSTRAINT USING 11 FACTORS (N = 1436)

MEASURES FOR DEALING WITH FINANCIAL CONSTRAINT	FACTORS AND FACTOR LOADINGS										
	1	2	3	4	5	6	7	8	9	10	11
61. That the institution terminate the employment of temporary academic staff deemed redundant, after attempting reassignment.	.17	.08	.12	.08	.74	-.03	.05	.05	-.10	-.12	.11
62. That the institution terminate the employment of permanent faculty members deemed redundant, after attempting reassignment.	.24	.05	.06	.06	.72	-.08	.07	.06	-.13	-.12	.11
63. That the institution establish clear guidelines regarding the process of termination of employment of redundant faculty members.	-.12	.10	.08	-.01	.67	.07	-.05	.03	-.01	.09	.17
65. That the institution base employment terminations of faculty members deemed redundant on the basis of their qualifications for the remaining programs.	.15	.06	-.07	.02	.58	.01	.06	.11	-.04	.12	.01
67. That the institution establish clear guidelines for discontinuing programs.	-.24	.26	.03	-.02	.41	.26	-.07	.14	.02	.24	.07

TABLE 4.24 (Continued)

VARIMAX FACTOR SOLUTION FOR MEASURES FOR DEALING WITH FINANCIAL CONSTRAINT USING 11 FACTORS (N = 1436)

MEASURES FOR DEALING WITH FINANCIAL CONSTRAINT	FACTORS AND FACTOR LOADINGS										
	1	2	3	4	5	6	7	8	9	10	11
43. That the institution lobby government for more favourable funding arrangements.	-.27	.10	-.06	.02	.03	.64	-.02	-.05	.22	-.02	.01
42. That the institution establish a task force to identify various measures to deal with financial constraint.	.08	.08	-.02	-.03	-.10	.63	.01	.03	-.04	.04	.18
40. That the institution involve faculty members in the formation of measures to deal with financial constraint.	-.05	.05	.02	-.03	.10	.61	-.01	.03	-.13	.10	.05
41. That the institution review its mission as a preliminary step to taking action to deal with financial constraint.	.04	-.01	-.07	-.02	-.06	.59	-.08	.13	-.09	.08	.10
45. That the institution actively encourage support groups (e.g., community organizations, alumni) to lobby various constituencies on behalf of the college or technical institute.	-.16	.14	-.03	.01	.14	.57	.05	-.10	.36	.06	-.04
46. That the institution utilize publicity campaigns in order to enhance the legitimacy of its activities.	-.06	.18	-.10	-.03	.07	.49	.08	-.10	.40	-.04	.02

TABLE 4.24 (Continued)

VARIMAX FACTOR SOLUTION FOR MEASURES FOR DEALING WITH FINANCIAL CONSTRAINT USING 11 FACTORS (N = 1436)

MEASURES FOR DEALING WITH FINANCIAL CONSTRAINT	FACTORS AND FACTOR LOADINGS										
	1	2	3	4	5	6	7	8	9	10	11
80. That the institution increase tuition fees.	.11	.08	.05	.15	.04	-.07	.73	.00	.09	-.04	.06
81. That the institution increase charges for student computing services.	.15	.09	.05	.13	.00	-.04	.70	.01	.02	-.04	.09
96. That the institution require student housing to become self-supporting.	-.11	.11	.20	.04	.06	.08	.54	.13	-.26	.13	.05
95. That the institution require food services to become self-supporting.	-.11	.05	.20	-.02	.04	.11	.50	.12	-.26	.18	.02

TABLE 4.24 (Continued)

VARIMAX FACTOR SOLUTION FOR MEASURES FOR DEALING WITH FINANCIAL CONSTRAINT USING 11 FACTORS (N = 1436)

MEASURES FOR DEALING WITH FINANCIAL CONSTRAINT	FACTORS AND FACTOR LOADINGS 1	2	3	4	5	6	7	8	9	10	11
69. That the institution discontinue academic programs of low priority.	.11	.15	.10	.11	.05	-.07	.07	.78	.02	-.06	.11
70. That the institution close departments of low priority.	.10	.15	.09	.11	.08	-.10	.10	.78	.01	-.06	.12
68. That the institution utilize program evaluations as a means of determining the priority of programs.	.05	.20	-.09	.01	.15	.14	-.08	.50	.07	.10	.04

TABLE 4.24 (Continued)

VARIMAX FACTOR SOLUTION FOR MEASURES FOR DEALING WITH FINANCIAL CONSTRAINT USING 11 FACTORS (N = 1436)

MEASURES FOR DEALING WITH FINANCIAL CONSTRAINT	FACTORS AND FACTOR LOADINGS										
	1	2	3	4	5	6	7	8	9	10	11
83. That the institution incur an operating deficit.	-.01	-.02	.16	-.03	-.09	-.08	.00	-.06	.59	-.06	.07
47. That the institution take significant financial risks when dealing with financial constraint.	.02	-.07	-.04	.00	-.12	.10	-.06	.05	.57	-.05	.09
44. That the institution threaten to reduce its academic programs unless adequate funding is forthcoming.	-.14	-.15	.02	-.03	-.12	.16	.02	.28	.44	-.11	.08

TABLE 4.24 (Continued)

VARIMAX FACTOR SOLUTION FOR MEASURES FOR DEALING WITH FINANCIAL CONSTRAINT USING 11 FACTORS (N = 1436)

MEASURES FOR DEALING WITH FINANCIAL CONSTRAINT	FACTORS AND FACTOR LOADINGS 1	2	3	4	5	6	7	8	9	10	11
85. That the institution utilize utility conservation measures (e.g., use of telephones).	-.01	.11	.10	.00	.02	.11	.07	.02	-.12	.78	.08
84. That the institution utilize energy conservation measures (e.g., use of electricity).	-.09	.15	-.02	-.02	.05	.16	.06	.00	-.06	.78	.07

TABLE 4.24 (Continued)

VARIMAX FACTOR SOLUTION FOR MEASURES FOR DEALING WITH FINANCIAL CONSTRAINT USING 11 FACTORS (N = 1436)

MEASURES FOR DEALING WITH FINANCIAL CONSTRAINT	FACTORS AND FACTOR LOADINGS										
	1	2	3	4	5	6	7	8	9	10	11
53. That the institution provide incentives for faculty members to resign from the institution.	.12	.01	.04	.05	.07	.09	.13	.07	.05	-.05	.60
49. That the institution provide incentives for the early retirement of faculty members.	-.12	.17	-.02	.-04	.04	.18	.04	-.01	.08	.02	.58
51. That the institution make it easier for faculty members to obtain voluntary leave without pay.	-.04	.05	.02	-.09	.15	.06	.00	.15	-.01	.22	.51
50. That the institution provide incentives for changing the full-time employment of permanent faculty members to part-time employment.	.25	-.04	-.02	-.07	.08	.05	.03	.05	.05	.00	.47
64. That the institution base employment terminations of faculty members deemed redundant on seniority (last in/first out).	-.20	.07	.25	.09	-.01	.03	-.31	-.01	.11	-.08	.11
66. That the institution base employment terminations of faculty members deemed redundant on faculty performance evaluations.	.26	.06	-.17	.05	.32	.00	.09	.25	-.09	.08	-.05
71. That the institution merge related departments.	.11	.34	.12	.02	.17	.01	.07	.37	-.04	.11	.09
74. That the institution enhance its reputation by developing programs of greatest academic potential.	.04	.39	-.13	.05	-.06	-.04	-.01	.10	.29	.06	-.03

TABLE 4.24 (Concluded)

VARIMAX FACTOR SOLUTION FOR MEASURES FOR DEALING WITH FINANCIAL CONSTRAINT USING 11 FACTORS (N = 1436)

MEASURES FOR DEALING WITH FINANCIAL CONSTRAINT	FACTORS AND FACTOR LOADINGS										
	1	2	3	4	5	6	7	8	9	10	11
78. That the institution raise admission standards.	.06	.12	-.23	.24	-.03	-.22	.29	.01	.15	-.03	.27
82. That the institution sell some of its assets.	.14	.07	.16	.07	.01	-.12	.39	.02	.21	.07	.11
86. That the institution cut budgets by the same percentage for all departments.	.12	.05	.22	.16	-.23	-.15	-.24	-.14	.02	.22	.29
87. That the institution cut budgets in selected areas only.	.03	-.01	-.02	-.02	.31	.20	.34	.33	.01	-.09	-.20
88. That the institution establish procedures to reallocate internal resources on a priority basis.	-.01	.20	-.01	.02	.29	.18	.25	.39	.00	.19	-.10
97. That the institution reduce budget allocations for student health services.	.02	-.02	.35	.28	-.05	-.05	.29	.07	-.24	-.15	.03
PERCENT OF TOTAL VARIANCE	**9.5**	**8.6**	**5.2**	**3.9**	**3.4**	**3.2**	**3.0**	**2.7**	**2.5**	**2.4**	**2.3**

KEY:

Factor 1 = "salaries and positions"; Factor 2 = "program development"; Factor 3 = "facilities and equipment/faculty support"; Factor 4 = "budget reductions for support services"; Factor 5 = "abolishment of positions and programs"; Factor 6 = "soliciting support groups"; Factor 7 = "revenue enhancement"; Factor 8 = "discontinuance of programs"; Factor 9 = "deficit financing"; Factor 10 = "conservation measures"; Factor 11 = "incentives for reducing faculty".

factors accounted for 46.8% of the total variance.

The resulting 11 factors were as follows:

1. salaries and positions
2. program development
3. facilities and equipment/faculty support
4. budget reductions for support services
5. abolishment of positions and programs
6. soliciting support groups
7. revenue enhancement
8. discontinuance of programs
9. deficit financing
10. conservation measures, and
11. incentives for reducing faculty.

The labels used to describe each factor may conceal some complexity. For example, factor 2, "program development," loads six items relating to the expansion of programming. This factor also loads an item referring to retraining faculty members (item 52) and an item referring to fund-raising (item 79). Another example is factor 9, "deficit financing," which loads an item on operating deficits (item 83), an item referring to institutional risk-taking (item 47) and an item referring to threatening program reductions (item 44). In the subsequent text, quotation marks will be used with each label to indicate that the operational meaning of each factor is based entirely upon the items loading on that respective factor.

Acceptability of the Eleven Factors

By calculating a factor mean, it is possible to rank the eleven factors in order of diminishing acceptability to faculty members of the various measures for dealing with financial constraint. Table 4.25 reports the rank order of the eleven factors according to their acceptability in principle for dealing with financial constraint, beginning with the most acceptable factor. The rank order of the eleven factors was determined by ranking the factor mean for each of the factors. For each factor, the factor mean was calculated from the means of the individual items loading on that factor. Therefore, the factor mean retains a relationship to the scale used in Part III of the questionnaire, where 1 = "very unacceptable" and 5 = "very acceptable." The means of the individual items were obtained from Table 4.23. The individual items are presented in order of their loading on their respective factors.

Faculty members tended to consider as very acceptable "conservation measures" (4.10), "program development" (4.07), and "soliciting support groups" (4.04). Faculty also tended to consider as acceptable "abolishment of positions and programs" (3.65). Faculty tended to consider as neutral or uncertain "discontinuance of programs" (3.35), "revenue enhancement" (3.32), "incentives for reducing faculty" (3.20), "budget reductions for support services" (2.91) and "deficit financing" (2.70). Faculty tended to consider as unacceptable "facilities

TABLE 4.25

RANK ORDERING OF FACTORS ACCORDING TO ACCEPTABILITY IN PRINCIPLE OF MEASURES FOR DEALING WITH FINANCIAL CONSTRAINT

RANK ORDER	FACTOR MEAN	FACTORS AND ITEMS	ITEM MEAN
1	4.10	FACTOR 10: CONSERVATION MEASURES	
		85. That the institution utilize utility conservation measures (e.g., use of telephones).	3.95
		84. That the institution utilize energy conservation measures (e.g., use of electricity).	4.25
2	4.07	FACTOR 2: PROGRAM DEVELOPMENT	
		73. That the institution expand current programs in high-demand areas.	4.30
		72. That the institution develop new programs in high-demand areas.	4.32
		75. That the institution undertake more programs in cooperation with business and industry.	4.13
		76. That the institution enter into arrangements with other colleges or technical institutes in the delivery of programs.	4.05
		48. That the institution align its programs more closely with Canada's employment needs.	3.72
		77. That the institution strive to recruit students in programs in which its enrollment is below capacity.	4.02
		52. That the institution provide incentives for the retraining of faculty members for high-demand areas within the college or technical institute.	4.09

TABLE 4.25 (Continued)

RANK ORDERING OF FACTORS ACCORDING TO ACCEPTABILITY IN PRINCIPLE OF MEASURES FOR DEALING WITH FINANCIAL CONSTRAINT

RANK ORDER	FACTOR MEAN	FACTORS AND ITEMS	ITEM MEAN
2	4.07	FACTOR 2: PROGRAM DEVELOPMENT (Continued)	
		79. That the institution increase its effort at fund-raising from private benefactors.	3.93
3	4.04	FACTOR 6: SOLICITING SUPPORT GROUPS	
		43. That the institution lobby government for more favourable funding arrangements.	4.43
		42. That the institution establish a task force to identify various measures to deal with financial constraint.	3.78
		40. That the institution involve faculty members in the formation of measures to deal with financial constraint.	4.11
		41. That the institution review its mission as a preliminary step to taking action to deal with financial constraint.	3.83
		45. That the institution actively encourage support groups (e.g., community organizations, alumni) to lobby various constituencies on behalf of the college or technical institute.	4.17
		46. That the institution utilize publicity campaigns in order to enhance the legitimacy of its activities.	3.94

TABLE 4.25 (Continued)

RANK ORDERING OF FACTORS ACCORDING TO ACCEPTABILITY IN PRINCIPLE OF MEASURES FOR DEALING WITH FINANCIAL CONSTRAINT

RANK ORDER	FACTOR MEAN	FACTORS AND ITEMS	ITEM MEAN
4	3.65	FACTOR 5: ABOLISHMENT OF POSITIONS AND PROGRAMS	
		61. That the institution terminate the employment of temporary academic staff deemed redundant, after attempting reassignment.	3.36
		62. That the institution terminate the employment of permanent faculty members deemed redundant, after attempting reassignment.	3.00
		63. That the institution establish clear guidelines regarding the process of termination of employment of redundant faculty members.	4.08
		65. That the institution base employment terminations of faculty members deemed redundant on the basis of their qualifications for the remaining programs.	3.50
		67. That the institution establish clear guidelines for discontinuing programs.	4.33
5	3.35	FACTOR 8: DISCONTINUANCE OF PROGRAMS	
		69. That the institution discontinue academic programs of low priority.	3.26
		70. That the institution close departments of low priority.	3.16
		68. That the institution utilize program evaluations as a means of determining the priority of programs.	3.62

TABLE 4.25 (Continued)

RANK ORDERING OF FACTORS ACCORDING TO ACCEPTABILITY IN PRINCIPLE OF MEASURES FOR DEALING WITH FINANCIAL CONSTRAINT

RANK ORDER	FACTOR MEAN	FACTORS AND ITEMS	ITEM MEAN
6	3.32	FACTOR 7: REVENUE ENHANCEMENT	
		80. That the institution increase tuition fees.	3.11
		81. That the institution increase charges for student computing services.	2.98
		96. That the institution require student housing to become self-supporting.	3.54
		95. That the institution require food services to become self-supporting.	3.63
7	3.20	FACTOR 11: INCENTIVES FOR REDUCING FACULTY	
		53. That the institution provide incentives for faculty members to resign from the institution.	2.91
		49. That the institution provide incentives for the early retirement of faculty members.	3.86
		51. That the institution make it easier for faculty members to obtain voluntary leave without pay.	3.72
		50. That the institution provide incentives for changing the full- time employment of permanent faculty members to part-time employment.	2.30

TABLE 4.25 (Continued)
RANK ORDERING OF FACTORS ACCORDING TO ACCEPTABILITY IN PRINCIPLE OF MEASURES FOR DEALING WITH FINANCIAL CONSTRAINT

RANK ORDER	FACTOR MEAN	FACTORS AND ITEMS	ITEM MEAN
8	2.91	FACTOR 4: BUDGET REDUCTIONS FOR SUPPORT SERVICES	
		93. That the institution reduce budget allocations for the accounting office.	3.04
		92. That the institution reduce budget allocations for the registrar's office.	2.80
		91. That the institution reduce budget allocations for secretarial support.	2.48
		89. That the institution reduce budget allocations for non-academic staff.	2.67
		94. That the institution reduce budget allocations for student counselling services.	2.41
		90. That the institution reduce the number of administrators.	4.04
9	2.70	FACTOR 9: DEFICIT FINANCING	
		83. That the institution incur an operating deficit.	2.54
		47. That the institution take significant financial risks when dealing with financial constraint.	2.58
		44. That the institution threaten to reduce its academic programs unless adequate funding is forthcoming.	2.97

TABLE 4.25 (Continued)

RANK ORDERING OF FACTORS ACCORDING TO ACCEPTABILITY IN PRINCIPLE OF MEASURES FOR DEALING WITH FINANCIAL CONSTRAINT

RANK ORDER	FACTOR MEAN	FACTORS AND ITEMS	ITEM MEAN
10	2.42	FACTOR 3: FACILITIES AND EQUIPMENT/FACULTY SUPPORT	
		104. That the institution defer the purchase of new equipment.	2.28
		103. That the institution defer repairs and renovations to facilities.	2.25
		99. That the institution reduce budget allocations for instructional supplies.	2.01
		98. That the institution reduce budget allocations for the purchase of library materials.	2.02
		101. That the institution reduce budget allocations for faculty members' travel.	2.74
		100. That the institution reduce budget allocations for faculty members' academic computing services.	2.59
		102. That the institution defer the improvement of grounds.	3.05
11	1.88	FACTOR 1: SALARIES AND POSITIONS	
		59. That the institution negotiate a freeze in faculty members' salaries.	1.62
		60. That the institution negotiate a reduction in faculty members' salaries.	1.38
		55. That the institution fill vacant positions with sessional appointments.	2.18

TABLE 4.25 (Concluded)

RANK ORDERING OF FACTORS ACCORDING TO ACCEPTABILITY IN PRINCIPLE OF MEASURES FOR DEALING WITH FINANCIAL CONSTRAINT

RANK ORDER	FACTOR MEAN	FACTORS AND ITEMS	ITEM MEAN
11	1.88	FACTOR 1: SALARIES AND POSITIONS (Continued)	
		57. That the institution not appoint new faculty members to permanent positions.	1.95
		58. That the institution increase the average faculty teaching workload.	1.78
		56. That the institution establish quotas on the number of permanent positions within each department.	2.27
		54. That the institution leave vacant faculty positions unfilled.	1.98

The scale is as follows:

1 = very unacceptable
2 = unacceptable
3 = neutral/uncertain
4 = acceptable
5 = very acceptable

and equipment/faculty support" (2.42) and as very unacceptable "salaries and positions" (1.88).

Group Differences in Acceptability

The search to identify group differences in the acceptability in principle of measures for dealing with financial constraint was directed to the 11 factors developed in the previous section rather than to the original 65 items included in Part III of the questionnaire. Unloaded items in the factor analysis were excluded from further analysis for group differences in the acceptability in principle of measures for dealing with financial constraint.

Responses by Program Area

Four categories were created to analyze responses by program area: (1) adult basic education/academic upgrading; (2) apprenticeship; (3) career programs and (4) university transfer. The "other" category was omitted from the analysis since it was not specific to a particular program area.

Table 4.26 reports the significant differences identified in the one-way analysis of variance of the acceptability in principle of measures for dealing with financial constraint classified by program area. The level of significance was set at the 0.05 level for the analysis of variance and the level of significance was set at the 0.10 level for the Scheffé procedure to

TABLE 4.26

ONE-WAY ANALYSIS OF VARIANCE OF FACTOR SCORES OF MEASURES ACCEPTABLE IN PRINCIPLE FOR DEALING WITH FINANCIAL CONSTRAINT CLASSIFIED BY PROGRAM AREA

		MEANS						
FACTOR		Overall	G1	G2	G3	G4	F Prob.	Intergroup Differences
1.	Salaries and positions	1.88	1.90	2.08	1.89	1.72	0.00	2>4, 2>3, 2>1, 1>4, 3>4
2.	Program development	4.08	4.15	4.18	4.15	3.75	0.00	2>4, 1>4, 3>4
3.	Facilities and equipment/faculty support	2.42	2.50	2.41	2.38	2.48	0.03	1>3
4.	Budget reductions for support services	2.92	2.81	3.01	2.92	2.97	0.01	2>1, 4>1
5.	Abolishment of positions and programs	3.65	3.59	3.77	3.67	3.53	0.00	2>4, 3>4
6.	Soliciting support programs	4.04	4.10	3.89	4.00	4.17	0.00	4>2, 4>3, 1>2
7.	Revenue enhancement	3.31	3.10	3.29	3.43	3.18	0.00	3>1, 3>4, 2>1
8.	Discontinuance of programs	3.34	3.29	3.46	3.44	3.01	0.00	2>4, 3>4, 3>1, 1>4
9.	Deficit financing	2.68	2.69	2.53	2.64	2.91	0.00	4>2, 4>3, 4>1

G1 = adult basic education/academic upgrading; G2 = Apprenticeship; G3 = Career programs; G4 = University transfer.
The scale for the means is as follows: 1 = very unacceptable; 2 = unacceptable; 3 = neutral/uncertain; 4 = acceptable; 5 = very acceptable.

identify distinct pairs of factor means. Of the 11 factors, nine were identified as having significant differences. With regard to factor 1, "salaries and positions," respondents from university transfer programs considered these measures significantly less acceptable than did respondents from adult basic education/academic upgrading, apprenticeship and career programs. Also with regard to factor 1, respondents from adult basic education/academic upgrading and career programs consider the factor 1 measures significantly less acceptable than did respondents from apprenticeship programs. With regard to factor 2, "program development," respondents from adult basic education/academic upgrading, apprenticeship and career programs considered these measures significantly more acceptable than did respondents from university transfer programs. With regard to factor 3, "facilities and equipment/ faculty support," respondents from career programs considered these measures significantly less acceptable than did respondents from adult basic education/adult upgrading programs. With regard to factor 4, "budget reductions for support services," respondents from adult basic education/academic upgrading programs considered these measures significantly less acceptable than did respondents from apprenticeship and university transfer programs. With regard to factor 5, "abolishment of positions and programs," respondents from apprenticeship and career programs considered these measures significantly more acceptable than did respondents from university transfer programs. With regard to factor 6, "soliciting support groups," respondents from university transfer programs considered these measures significantly more acceptable than did respondents from apprenticeship and career programs. Also, with regard to factor 6, respondents from adult basic education/academic upgrading programs considered these measures significantly more acceptable than did respondents from apprenticeship programs. With regard to factor 7, "revenue enhancement," respondents from apprenticeship and career programs considered these measures significantly more acceptable than did respondents from university transfer programs. With regard to factor 8, "discontinuance of programs," respondents from adult basic education/academic upgrading, apprenticeship and career programs considered these measures significantly more acceptable than did respondents from university transfer programs. Also, with regard to factor 8, respondents from career programs considered these measures significantly more acceptable than did respondents from adult basic education/academic upgrading programs. With regard to factor 9, "deficit financing," respondents from adult basic education/adult upgrading, apprenticeship and career programs considered these measures significantly less acceptable than did respondents from university transfer programs. On the remaining two factors, no significant differences were identified.

Generally, the acceptability in principle of measures for dealing with financial constraint varied considerably by program area. Respondents from university transfer programs were generally more extreme in their acceptance or non-acceptance of measures for dealing with financial constraint than were respondents from the other program areas.

Responses by Highest Academic Qualification

Table 4.27 reports the significant differences identified in the one-way analysis of variance of the acceptability in principle of measures for dealing with financial constraint classified by highest academic qualification. Data from the four categories were used to analyze the responses by highest academic qualification: (1) Doctorate; (2) Master's degree; (3) Bachelor's degree and (4) diploma (two years or more). The "other" group was omitted from the analysis because this group was not specific to a particular level of academic qualification. Of the 11 factors, seven were identified as having significant differences. With regard to factor 1, "salaries and positions," respondents with a Doctorate, Master's degree or a Bachelor's degree considered these measures significantly less acceptable than did respondents with a diploma. With regard to factor 2, "program development,"respondents with a diploma or a Bachelor's degree considered these measures significantly more acceptable than did respondents with a Doctorate or a Master's degree. Also with regard to

TABLE 4.27

ONE-WAY ANALYSIS OF VARIANCE OF FACTOR SCORES OF MEASURES ACCEPTABLE IN PRINCIPLE FOR DEALING WITH FINANCIAL CONSTRAINT CLASSIFIED BY HIGHEST ACADEMIC QUALIFICATION.

FACTOR		MEANS						Intergroup Differences
		Overall	G1	G2	G3	G4	F Prob.	
1.	Salaries and positions	1.86	1.72	1.80	1.87	2.02	0.00	4›1, 4›2, 4›3
2.	Program development	4.07	3.82	4.00	4.14	4.18	0.00	4›1, 4›2, 3›1, 3›2, 2›1
6.	Soliciting support groups	4.06	4.09	4.13	4.05	3.93	0.00	2›4, 1›4, 3›4
8.	Discontinuance of programs	3.34	3.18	3.29	3.37	3.42	0.02	4›1
9.	Deficit financing	2.71	2.80	2.84	2.64	2.57	0.00	2›4, 2›3, 1›4
10.	Conservation measures	4.11	4.14	4.24	4.05	3.99	0.00	2›4, 2›3
11.	Incentives for reducing faculty	3.22	3.19	3.31	3.18	3.13	0.01	2›4, 2›3

G1 = Doctorate; G2 = Master's degree; G3 = Bachelor's degree; G4 = Diploma (two years or more).
The scale for the means is as follows: 1 = very unacceptable; 2 = unacceptable; 3 = neutral/uncertain; 4 = acceptable; 5 = very acceptable.

factor 2, respondents with a Master's degree considered these measures significantly more acceptable than did respondents with a Doctorate. With regard to factor 6, "soliciting support groups," respondents with a Doctorate, a Master's degree or a Bachelor's degree considered these measures significantly more acceptable than did respondents with a diploma. With regard to factor 8, "discontinuance of programs," respondents with a diploma considered these measures significantly more acceptable than did respondents with a Doctorate. With regard to factor 9, "deficit financing," respondents with a diploma considered these measures significantly less acceptable than did respondents with a Doctorate or a Master's degree. Also with regard to factor 9, respondents with a Bachelor's degree considered these measures significantly less acceptable than did respondents with a Master's degree. With regard to factor 10, "conservation measures" and factor 11, "incentives for reducing faculty," respondents with a Master's degree considered these measures significantly more acceptable than did respondents with a Bachelor's degree or a diploma. On the remaining four factors no significant differences were identified.

Generally, the acceptability in principle of measures for dealing with financial constraint varied considerably by highest academic qualification. The greatest variation occurred between respondents with a Doctorate and respondents with a diploma.

Responses by Tenure Status

Table 4.28 reports the significant differences identified in *t* tests of the acceptability in principle of measures for dealing with financial constraint classified by tenure status. Of the 11 factors, five were identified as having significant differences. With regard to factor 1, "salaries and positions," tenured respondents considered these measures significantly less acceptable than did non-tenured respondents. With regard to factor 7, "revenue enhancement," factor 8, "discontinuance of programs" and factor 11, "incentives for reducing faculty," tenured respondents considered these measures significantly more acceptable than did non-tenured respondents. With regard to factor 9, "deficit financing," non-tenured respondents considered these measures significantly less acceptable than tenured respondents. On the remaining six factors, no significant differences were identified.

Generally, the acceptability in principle of measures for dealing with financial constraint varied little according to tenure status.

Responses by Employment Status

Table 4.29 reports the significant differences identified in *t* tests of the acceptability in principle of measures for dealing with financial constraint classified by employment status. Of the 11 factors, four were identified as having significant differences. With regard to factor 1,

TABLE 4.28

T TESTS OF FACTOR SCORES OF MEASURES ACCEPTABLE IN PRINCIPLE FOR DEALING WITH FINANCIAL CONSTRAINT CLASSIFIED BY TENURE STATUS

FACTOR		TENURED MEAN (N=1156)	NON-TENURED MEAN (N=266)	*t* VALUE*
1.	Salaries and positions	1.86	1.97	-2.40
7.	Revenue enhancement	3.33	3.17	3.42
8.	Discontinuance of programs	3.37	3.21	3.08
9.	Deficit financing	2.72	2.58	2.70
11.	Incentives for reducing faculty	3.24	3.06	3.44

*Significant at the 0.05 level.
Ns reported are maximums.
The scale for the means is as follows: 1 = very unacceptable; 2 = unacceptable; 3 = neutral/uncertain; 4 = acceptable; 5 = very acceptable.

TABLE 4.29

T TESTS OF FACTOR SCORES OF MEASURES ACCEPTABLE IN PRINCIPLE FOR DEALING WITH FINANCIAL CONSTRAINT CLASSIFIED BY EMPLOYMENT STATUS

FACTOR	CONTINUING MEAN (N=300)	SESSIONAL MEAN (N=110)	*t* VALUE*
1. Salaries and positions	1.86	2.14	-3.81
2. Program development	4.04	4.16	-2.07
9. Deficit financing	2.71	2.48	2.72
10. Conservation measures	3.99	4.18	-2.32

*Significant at the 0.05 level.
Ns reported are maximums.
The scale for the means is as follows: 1 = very unacceptable; 2 = unacceptable; 3 = neutral/uncertain; 4 = acceptable; 5 = very acceptable.

"salaries and positions," non-tenured respondents with continuing appointments considered these measures significantly less acceptable than did non-tenured respondents with sessional appointments. With regard to factor 2, "program development" and factor 10, "conservation measures," non-tenured respondents with sessional appointments considered these measures significantly more acceptable than did non-tenured respondents with continuing appointments. With regard to factor 9, "deficit financing," non-tenured respondents with sessional appointments considered these measures significantly less acceptable than did non-tenured respondents with continuing appointments. On the remaining seven factors, no significant differences were identified.

Generally, the acceptability in principle of measures for dealing with financial constraint varied little according to whether a non-tenured respondent had a continuing or a sessional appointment.

Responses by Nature of Appointment

Table 4.30 reports the significant differences identified in *t* tests of the acceptability in principle of measures for dealing with financial constraint classified by nature of appointment, either full-time or part-time. Of the 11 factors, two were identified as having significant differences. With regard to factor 7, "revenue enhancement" and factor 8, "discontinuance of programs," full-time respondents considered these measures significantly more acceptable than did part-time respondents.

TABLE 4.30

T TESTS OF FACTOR SCORES OF MEASURES ACCEPTABLE IN PRINCIPLE FOR DEALING WITH FINANCIAL CONSTRAINT CLASSIFIED BY NATURE OF APPOINTMENT

FACTOR	FULL-TIME MEAN (N=1357)	PART-TIME MEAN (N=55)	*t* VALUE*
7. Revenue enhancement	3.31	3.11	2.11
8. Discontinuance of programs	3.35	3.13	2.04

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*Significant at the 0.05 level.
Ns reported are maximums.
The scale for the means is as follows: 1 = very unacceptable; 2 = unacceptable; 3 = neutral/uncertain; 4 = acceptable; 5 = very acceptable.

On the remaining nine factors, no significant differences were identified.

Generally, the acceptability in principle of measures for dealing with financial constraint varied little according to whether the respondent had a full-time or a part-time appointment.

Responses by Administrative Position

Table 4.31 reports the significant differences identified in *t* tests of the acceptability in principle of measures for dealing with financial constraint classified by administrative position. Of the 11 factors, seven were identified as having significant differences. With regard to factor 1, "salaries and positions" and factor 3, "facilities and equipment/faculty support,"those respondents with no administrative position considered these measures significantly less acceptable than did respondents with an administrative position. With regard to factor 2, "program development," factor 5, "abolishment of positions and programs," factor 6, "soliciting support groups," factor 7, "revenue enhancement" and factor 8, "discontinuance of programs," those respondents with an administrative position considered these measures significantly more acceptable than did respondents with no administrative position. On the remaining four factors, no significant differences were identified.

Generally, the acceptability in principle of measures for dealing with financial constraint varied considerably according to whether or not

TABLE 4.31

T TESTS OF FACTOR SCORES OF MEASURES ACCEPTABLE IN PRINCIPLE FOR DEALING WITH FINANCIAL CONSTRAINT CLASSIFIED BY ADMINISTRATIVE POSITION

FACTOR		NO ADMIN. POS'N. MEAN (N=1089)	ADMIN. POS'N. MEAN (N=331)	*t* VALUE*
1.	Salaries and positions	1.86	1.95	-2.39
2.	Program development	4.07	4.14	-2.36
3.	Facilities and equipment/faculty support	2.40	2.48	-2.03
5.	Abolishment of positions and programs	3.61	3.78	-4.32
6.	Soliciting support groups	4.01	4.13	-3.45
7.	Revenue enhancement	3.26	3.44	-4.07
8.	Discontinuance of programs	3.31	3.45	-2.74

*Significant at the 0.05 level.
Ns reported are maximums.
The scale for the means is as follows: 1 = very unacceptable; 2 = unacceptable; 3 = neutral/uncertain; 4 = acceptable; 5 = very acceptable.

the respondent was an administrator. Respondents who were not administrators were more extreme than administrators in their acceptance or non-acceptance of these measures for dealing with financial constraint. Compared to administrators, the non-administrators would be impacted more by a reduction in salaries, positions, facilities, equipment and faculty support services. Administrators, on the other hand, preferred to be able to use many different measures to deal with financial constraint.

Responses by Province

Table 4.32 reports the significant differences identified in the one-way analysis of variance of the acceptability in principle of measures for dealing with financial constraint classified by province. Of the 11 factors, eight were identified as having significant differences. With regard to factor 1, "salaries and positions," respondents from British Columbia considered these measures significantly less acceptable than did respondents from Manitoba. With regard to factor 2, "program development," respondents from Manitoba and Saskatchewan considered these measures significantly more acceptable than did respondents from British Columbia. With regard to factor 3, "facilities and equipment/ faculty support," respondents from British Columbia and Manitoba considered these measures significantly less acceptable than did respondents from Saskatchewan. With regard to factor 6, "soliciting

TABLE 4.32

ONE-WAY ANALYSIS OF VARIANCE OF FACTOR SCORES OF MEASURES ACCEPTABLE IN PRINCIPLE FOR DEALING WITH FINANCIAL CONSTRAINT CLASSIFIED BY PROVINCE

FACTOR	MEANS						Intergroup Differences
	Overall	G1	G2	G3	G4	F Prob.	
1. Salaries and positions	1.88	1.89	1.83	2.02	1.92	0.03	3>2
2. Program development	4.08	4.09	4.02	4.21	4.17	0.00	3>2, 4>2
3. Facilities and equipment/faculty support	2.42	2.45	2.38	2.32	2.50	0.01	4>3, 4>2
6. Soliciting support groups	4.04	3.98	4.13	3.99	3.99	0.00	2>1, 2>4
7. Revenue enhancement	3.31	3.43	3.14	3.48	3.31	0.00	3>2, 1>2, 4>2
8. Discontinuance of programs	3.34	3.36	3.20	3.61	3.51	0.00	3>2, 3>1, 4>2, 4>1, 1>2
9. Deficit financing	2.70	2.54	2.82	2.78	2.75	0.00	2>1, 3>1, 4>1
11. Incentives for reducing faculty	3.20	3.17	3.32	3.27	2.97	0.00	2>4, 2>1, 3>4, 1>4

G1 = Alberta; G2 = British Columbia; G3 = Manitoba; G4 = Saskatchewan.
The scale for the means is as follows: 1 = very unacceptable; 2 = unacceptable; 3 = neutral/uncertain; 4 = acceptable; 5 = very acceptable.

support groups," respondents from British Columbia considered these measures significantly more acceptable than did respondents from Alberta and Saskatchewan. With regard to factor 7, "revenue enhancement,"and factor 8, "discontinuance of programs," respondents from Alberta, Manitoba and Saskatchewan considered these measures significantly more acceptable than did respondents from British Columbia. Also with regard to factor 8, respondents from Manitoba and Saskatchewan considered these measures significantly more acceptable than did respondents from Alberta. With regard to factor 9, "deficit financing," respondents from Alberta considered these measures significantly less acceptable than did respondents from British Columbia, Manitoba and Saskatchewan. With regard to factor 11, "incentives for reducing faculty," respondents from Alberta, British Columbia and Manitoba considered these measures significantly more acceptable than did respondents from Saskatchewan. Also with regard to factor 11, respondents from British Columbia considered these measures significantly more acceptable than did respondents from Alberta. On the remaining three factors, no significant differences were identified.

Generally, the acceptability in principle of measures for dealing with financial constraint varied considerably by province. Often respondents from British Columbia were more extreme than were respondents from Alberta, Manitoba or Saskatchewan in their acceptance or non-acceptance of these measures for dealing with financial constraint.

Responses by Sector

Table 4.33 reports the significant differences identified in *t* tests of the acceptability in principle of measures for dealing with financial constraint classified by sector, either college or technical institute. Of the 11 factors, seven were identified as having significant differences. With regard to factor 1, "salaries and positions," and factor 4, "budget reductions for support services," respondents from the college sector considered these measures significantly less acceptable than did respondents from the technical institute sector. With regard to factor 2, "program development," factor 7, "revenue enhancement" and factor 8, "discontinuance of programs," respondents from the technical institute sector considered these measures significantly more acceptable than did respondents from the college sector. With regard to factor 6, "soliciting support groups" and factor 10, "conservation measures,"respondents from the college sector considered these measures significantly more acceptable than did respondents from the technical institute sector. On the remaining four factors, no significant differences were identified.

Generally, the acceptability in principle of measures for dealing with financial constraint varied somewhat by sector, but no pattern was apparent.

TABLE 4.33

T TESTS OF FACTOR SCORES OF MEASURES ACCEPTABLE IN PRINCIPLE FOR DEALING WITH FINANCIAL CONSTRAINT CLASSIFIED BY SECTOR (COLLEGE OR INSTITUTE)

FACTOR		COLLEGE MEAN (N=933)	INSTITUTE MEAN (N=491)	*t* VALUE*
1.	Salaries and positions	1.85	1.95	-2.90
2.	Program development	4.03	4.18	-5.35
4.	Budget reductions for support services	2.85	3.00	-4.03
6.	Soliciting support groups	4.07	3.98	3.01
7.	Revenue enhancement	3.25	3.40	-3.87
8.	Discontinuance of programs	3.29	3.45	-3.90
10.	Conservation measures	4.13	4.03	2.15

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*Significant at the 0.05 level.
Ns reported are maximums.
The scale for the means is as follows: 1 = very unacceptable; 2 = unacceptable; 3 = neutral/uncertain; 4 = acceptable; 5 = very acceptable.

Responses by Size of Institution

Table 4.34 reports the significant differences identified in the one-way analysis of variance of the acceptability in principle of measures for dealing with financial constraint classified by size of institution. Of the 11 factors, only three were identified as having significant differences. With regard to factor 6, "soliciting support groups," respondents from an institution with 3,000 to 4,999 full-time equivalent students (FTEs) considered these measures significantly more acceptable than did respondents from an institution with fewer than 1,500 FTEs. With regard to factor 9, "deficit financing," respondents from an institution with fewer than 1,500 FTEs considered these measures significantly less acceptable than did respondents from an institution with 3,000 to 4,999 FTEs or respondents from an institution with 5,000 to 9,999 FTEs. With regard to factor 11, "incentives for reducing faculty," respondents from an institution with 5,000 to 9,999 FTEs considered these measures significantly more acceptable than did respondents from an institution with 1,500 to 2,999 FTEs or respondents from an institution with fewer than 1,500 FTEs. On the remaining eight factors, no significant differences were identified.

Generally, the acceptability in principle of measures for dealing with financial constraint varied little by size of institution. The factors that were significant indicated some differences between respondents from institutions with fewer than 1,500 FTEs and respondents from the

TABLE 4.34

ONE-WAY ANALYSIS OF VARIANCE OF FACTOR SCORES OF MEASURES ACCEPTABLE IN PRINCIPLE FOR DEALING WITH FINANCIAL CONSTRAINT CLASSIFIED BY SIZE OF INSTITUTION

FACTOR		MEANS							Intergroup Differences
		Overall	G1	G2	G3	G4	G5	F Prob.	
6.	Soliciting support groups	4.04	3.99	4.04	4.13	4.01	4.05	0.05	3>1
9.	Deficit financing	2.71	2.58	2.71	2.79	2.75	2.78	0.01	3>1, 4>1
11.	Incentives for reducing faculty	3.20	3.13	3.10	3.24	3.30	3.25	0.00	4>2, 4>1

G1 = Fewer than 1,500 full-time equivalent (FTE) students; G2 = 1,500 to 2,999 FTE students; G3 = 3,000 to 4,999 FTE students; G4 = 5,000 to 9,999 FTE students; G5 = 10,000 or more FTE students.

The scale for the means is as follows: 1 = very unacceptable; 2 = unacceptable; 3 = neutral/uncertain; 4 = acceptable; 5 = very acceptable.

larger institutions.

Responses by Years Employed at Institution

Table 4.35 reports the significant differences identified in the one-way analysis of variance of the acceptability in principle of measures for dealing with financial constraint classified by years employed at institution. No respondents reported being at their institutions for 30 years or more. Of the 11 factors, five were identified as having significant differences. With regard to factor 4, "budget reductions for support services," respondents employed at their institutions for less than five years, 5 to 9 years or 10 to 19 years considered these measures significantly less acceptable than did respondents employed at their institutions 20 to 29 years. With regard to factor 6, "soliciting support groups," respondents employed at their institutions 10 to 19 years considered these measures significantly more acceptable than did respondents employed at their institutions 5 to 9 years or 20 to 29 years. With regard to factor 8, "discontinuance of programs," respondents employed at their institutions 20 to 29 years considered these measures significantly more acceptable than did respondents employed at their institutions less than 5 years. With regard to factor 9, "deficit financing," respondents employed at their institutions less than 5 years or 5 to 9 years considered these measures significantly less acceptable than did respondents employed at their institutions 10 to 19 years or 20 to 29 years.

TABLE 4.35

ONE-WAY ANALYSIS OF VARIANCE OF FACTOR SCORES OF MEASURES ACCEPTABLE IN PRINCIPLE FOR DEALING WITH FINANCIAL CONSTRAINT CLASSIFIED BY YEARS EMPLOYED AT INSTITUTION

		MEANS						
FACTOR		Overall	G1	G2	G3	G4	F Prob.	Intergroup Differences
4.	Budget reductions for support services	2.91	2.83	2.87	2.92	3.13	0.00	4>1, 4>2, 4>3
6.	Soliciting support programs	4.04	4.06	3.97	4.11	3.96	0.00	3>4, 3>2
8.	Discontinuance of programs	3.34	3.26	3.35	3.36	3.47	0.04	4>1
9.	Deficit financing	2.70	2.59	2.59	2.80	2.84	0.00	4>2, 4>1, 3>2, 3>1
11.	Incentives for reducing faculty	3.20	3.02	3.16	3.32	3.33	0.00	4>1, 3>1, 3>2, 2>1

G1 = less than 5 years; G2 = 5 to 9 years; G3 = 10 to 19 years; G4 = 20 to 29 years.
The scale for the means is as follows: 1 = very unacceptable; 2 = unacceptable; 3 = neutral/uncertain; 4 = acceptable; 5 = very acceptable.

With regard to factor 11, "incentives for reducing faculty,"respondents employed at their institutions 5 to 9 years, 10 to 19 years or 20 to 29 years considered these measures significantly more acceptable than did respondents employed at their institutions less than 5 years. Also with regard to factor 11, respondents employed at their institutions 10 to 19 years considered these measures significantly more acceptable than did respondents employed at their institutions 5 to 9 years. On the remaining six factors, no significant differences were identified.

Generally, the acceptability in principle of measures for dealing with financial constraint varied to some extent by years employed at institution, but no pattern was apparent.

Responses by Age

Table 4.36 reports the significant differences identified in the one-way analysis of variance of the acceptability in principle of measures for dealing with financial constraint classified by age. Since the percentage of respondents "under 30 years" was only 2.1 percent and "60 years and over" was only 2.4 percent, these age categories were included in the "30 to 39 years" age category and the "50 to 59 years" age category, respectively. The modified age categories are "under 40 years," "40 to 49 years" and "50 years and over." Of the 11 factors, seven were identified as having significant differences. With regard to factor 1, "salaries and positions" and factor 4, "budget reductions for support services,"

TABLE 4.36

ONE-WAY ANALYSIS OF VARIANCE OF FACTOR SCORES OF MEASURES ACCEPTABLE IN PRINCIPLE FOR DEALING WITH FINANCIAL CONSTRAINT CLASSIFIED BY AGE

		MEANS					
FACTOR		Overall	G1	G2	G3	F Prob.	Intergroup Differences
1.	Salaries and positions	1.88	1.87	1.84	1.97	0.01	3>2, 3>1
4.	Budget reductions for support services	2.91	2.87	2.88	3.00	0.01	3>1, 3>2
6.	Soliciting support programs	4.04	4.02	4.08	3.98	0.02	2>3
8.	Discontinuance of programs	3.34	3.19	3.38	3.47	0.00	3>1, 2>1
9.	Deficit financing	2.69	2.59	2.71	2.79	0.00	3>1, 2>1
10.	Conservation measures	4.10	4.11	4.16	3.95	0.00	2>3, 1>3
11.	Incentives for reducing faculty	3.20	3.11	3.18	3.36	0.00	3>1, 3>2

G1 = under 40 years; G2 = 40 to 49 years; G3 = 50 years and over.
The scale for the means is as follows: 1 = very unacceptable; 2 = unacceptable; 3 = neutral/uncertain; 4 = acceptable; 5 = very acceptable.

respondents under 40 years or 40 to 49 years considered these measures significantly less acceptable than did respondents 50 years and over. With regard to factor 6, "soliciting support groups," respondents 40 to 49 years considered these measures significantly more acceptable than did respondents 50 years and over. With regard to factor 8, "discontinuance of programs," respondents 40 to 49 years or 50 years and over considered these measures significantly more acceptable than did respondents under 40 years. With regard to factor 9, "deficit financing," respondents under 40 years considered these measures significantly less acceptable than did respondents 40 to 49 years or 50 years and over. With regard to factor 10, "conservation measures," respondents under 40 years or 40 to 49 years considered these measures significantly more acceptable than did respondents 50 years and over. With regard to factor 11, "incentives for reducing faculty," respondents 50 years and over considered these measures significantly more acceptable than did respondents under 40 years or 40 to 49 years. On the remaining four factors, no significant differences were identified.

Generally, the acceptability in principle of measures for dealing with financial constraint varied to some extent by age. Respondents under 40 years were more accepting or non-accepting of measures for dealing with financial constraint than were respondents from the older age categories.

Responses by Sex

Table 4.37 reports the significant differences identified in *t* tests of the acceptability in principle of measures for dealing with financial constraint classified by sex. Of the 11 factors, six were identified as having significant differences. With regard to factor 1, "salaries and positions," factor 3, "facilities and equipment/faculty support" and factor 4, "budget reductions for support services," female respondents considered these measures significantly less acceptable than did male respondents. With regard to factor 5, "abolition of positions and programs" and factor 7, "revenue enhancement," male respondents considered these measures significantly more acceptable than did female respondents. With regard to factor 6, "soliciting support groups," female respondents considered these measures significantly more acceptable than did male respondents. On the remaining five factors, no significant differences were identified.

Generally, the acceptability in principle of measures for dealing with financial constraint varied to some extent by sex. Female respondents generally considered the measures in the factors with significant differences to be less acceptable than did the male respondents, except for the factor "soliciting support groups."

TABLE 4.37

T TESTS OF FACTOR SCORES OF MEASURES ACCEPTABLE IN PRINCIPLE FOR DEALING WITH FINANCIAL CONSTRAINT CLASSIFIED BY SEX

FACTOR		FEMALE MEAN (N=492)	MALE MEAN (N=926)	*t* VALUE*
1.	Salaries and positions	1.83	1.91	-2.08
3.	Facilities and equipment/faculty support	2.38	2.44	-1.97
4.	Budget reductions for support services	2.71	3.01	-8.20
5.	Abolishment of positions and programs	3.60	3.68	-2.13
6.	Soliciting support groups	4.09	4.01	2.65
7.	Revenue enhancement	3.25	3.33	-2.09

*Significant at the 0.05 level.
Ns reported are maximums.
The scale for the means is as follows: 1 = very unacceptable; 2 = unacceptable; 3 = neutral/uncertain; 4 = acceptable; 5 = very acceptable.

Responses by Full-Time Faculty Positions Lost by the Institution

Table 4.38 reports the significant differences identified in the one-way analysis of variance of the acceptability in principle of measures for dealing with financial constraint classified by full-time faculty positions lost by the institution in the last five years as a result of financial constraint. Respondents were asked to reply "no," "yes" or "don't know." Of the 11 factors, only two were identified as having significant differences. With regard to factor 1, "salaries and positions," respondents from institutions that had lost full-time faculty positions in the last five years considered these measures significantly less acceptable than did respondents from institutions that had not lost full-time faculty positions in the last five years and respondents who didn't know if their institutions had lost full-time faculty positions in the last five years. With regard to factor 9, "deficit financing," respondents who didn't know if their institutions had lost full-time faculty positions in the last five years considered these measures significantly less acceptable than did respondents from institutions that had lost full-time faculty positions in the last five years. On the remaining nine factors, no significant differences were identified.

Generally, the acceptability in principle of measures for dealing with financial constraint varied little by full-time faculty positions lost by the institution in the last five years as a result of financial constraint.

TABLE 4.38

ONE-WAY ANALYSIS OF VARIANCE OF FACTOR SCORES OF MEASURES ACCEPTABLE IN PRINCIPLE FOR DEALING WITH FINANCIAL CONSTRAINT CLASSIFIED BY FACULTY POSITIONS LOST BY THE INSTITUTION

	MEANS					
FACTOR	Overall	G1	G2	G3	F Prob.	Intergroup Differences
1. Salaries and positions	1.88	1.98	1.83	1.95	0.00	1>2, 3>2
9. Deficit financing	2.69	2.64	2.74	2.61	0.01	2>3

G1 = no; G2 = yes; G3 = don't know.
The scale for the means is as follows: 1 = very unacceptable; 2 = unacceptable; 3 = neutral/uncertain; 4 = acceptable; 5 = very acceptable.

Responses by Full-Time Faculty Positions Lost by the Department

Table 4.39 reports the significant differences identified by the one-way analysis of variance of the acceptability in principle of measures for dealing with financial constraint classified by full-time faculty positions lost by the department in the last five years as a result of financial constraint. Respondents were asked to reply "no," "yes" or "don't know." Of the 11 factors, only three were identified as having significant differences. With regard to factor 1, "salaries and positions," respondents from departments that had lost full-time faculty positions in the last five years considered these measures significantly less acceptable than did respondents from departments that had not lost full-time faculty positions in the last five years and respondents who didn't know if their departments had lost full-time faculty positions in the last five years. Also with regard to factor 1, respondents from departments that had not lost full-time faculty positions in the last five years considered these measures significantly less acceptable than did respondents who didn't know if their departments had lost full-time faculty positions in the last five years. With regard to factor 5, "abolishment of positions and programs," respondents from departments that had lost full-time faculty positions in the last five years and respondents from departments that had not lost full-time faculty positions in the last five years considered these measures significantly more acceptable than did respondents who didn't

TABLE 4.39

ONE-WAY ANALYSIS OF VARIANCE OF FACTOR SCORES OF MEASURES ACCEPTABLE IN PRINCIPLE FOR DEALING WITH FINANCIAL CONSTRAINT CLASSIFIED BY FACULTY POSITIONS LOST BY THE DEPARTMENT

FACTOR		MEANS					Intergroup Differences
		Overall	G1	G2	G3	F Prob.	
1.	Salaries and positions	1.88	1.90	1.81	2.04	0.00	3>2, 3>1, 1>2
5.	Abolishment of positions and programs	3.65	3.66	3.67	3.48	0.01	2>3, 1>3
9.	Deficit financing	2.70	2.64	2.78	2.72	0.01	2>1

G1 = no; G2 = yes; G3 = don't know.
The scale for the means is as follows: 1 = very unacceptable; 2 = unacceptable; 3 = neutral/uncertain; 4 = acceptable; 5 = very acceptable.

know if their departments had lost full-time faculty positions in the last five years. With regard to factor 9, "deficit financing,"respondents from departments that had not lost full-time faculty positions in the last five years considered these measures significantly less acceptable than did respondents from departments that had lost full-time faculty positions in the last five years. On the remaining eight factors, no significant differences were identified.

Generally, the acceptability in principle of measures for dealing with financial constraint varied little by full-time faculty positions lost by the department in the last five years as a result of financial constraint.

Responses by Fair Financial Treatment of the Institution

Table 4.40 reports the significant differences identified in *t* tests of the acceptability in principle of measures for dealing with financial constraint classified by fair financial treatment of the institution in the past five years. Respondents were asked to respond "no" or "yes" to whether they believed their institution had been fairly treated, financially, in the past five years. Of the 11 factors, six were identified as having significant differences. With regard to factor 1, "salaries and positions" and factor 3, "facilities and equipment/faculty support," respondents who believed their institutions had not been fairly treated, financially, in the past five years considered these measures significantly less acceptable than did respondents who believed their institutions had been fairly

TABLE 4.40

T TESTS OF FACTOR SCORES OF MEASURES ACCEPTABLE IN PRINCIPLE FOR DEALING WITH FINANCIAL CONSTRAINT CLASSIFIED BY FAIR FINANCIAL TREATMENT OF THE INSTITUTION IN THE PAST FIVE YEARS

FACTOR	NO MEAN (N=962)	YES MEAN (N=407)	*t* VALUE*
1. Salaries and positions	1.79	2.06	-7.23
3. Facilities and equipment/faculty support	2.37	2.53	-4.60
6. Soliciting support groups	4.10	3.91	5.60
7. Revenue enhancement	3.26	3.41	-3.71
8. Discontinuance of programs	3.30	3.44	-2.96
9. Deficit financing	2.79	2.47	7.63

*Significant at the 0.05 level.

Ns reported are maximums.

The scale for the means is as follows: 1 = very unacceptable; 2 = unacceptable; 3 = neutral/uncertain; 4 = acceptable; 5 = very acceptable.

treated, financially, in the past five years. With regard to factor 6, "soliciting support groups," respondents who believed their institutions had not been fairly treated, financially, in the past five years considered these measures significantly more acceptable than did respondents who believed their institutions had been fairly treated, financially, in the past five years. With regard to factor 7, "revenue enhancement" and factor 8, "discontinuance of programs,"respondents who believed their institutions had been fairly treated, financially, in the past five years considered these measures significantly more acceptable than did respondents who believed their institutions had not been fairly treated, financially, in the past five years. With regard to factor 9, "deficit financing," respondents who believed their institutions had been fairly treated, financially, in the past five years considered these measures significantly less acceptable than did respondents who believed their institutions had not been fairly treated, financially, in the past five years. On the remaining five factors, no significant differences were identified.

Generally, the acceptability in principle of measures for dealing with financial constraint varied to some extent by whether or not the respondents believed their institutions had been fairly treated, financially, in the past five years. Except for factor 6, "soliciting support groups," respondents who believed their institutions had not been fairly treated, financially, in the past five years were more extreme in their acceptance or non-acceptance of these measures for dealing with financial constraint than were respondents who believed their institutions had been fairly treated, financially, in the past five years.

Responses by Fair Financial Treatment of the Department

Table 4.41 reports the significant differences identified in *t* tests of the acceptability in principle of measures for dealing with financial constraint classified by fair financial treatment of the department in the past five years. Respondents were asked to respond "no" or "yes" to whether they believed their department had been fairly treated, financially, in the past five years. Of the 11 factors, six were identified as having significant differences. With regard to factor 1, "salaries and positions" and factor 3, "facilities and equipment/faculty support," respondents who believed their departments had not been fairly treated, financially, over the past five years considered these measures significantly less acceptable than did respondents who believed their departments had been treated fairly, financially, over the past five years. With regard to factor 5, "abolition of positions and programs" and factor 11, "incentives for reducing faculty," respondents who believed their departments had been fairly treated, financially, over the past five years considered these measures significantly more acceptable than did respondents who believed their departments had not been treated fairly, financially, over the past five years. With regard to factor 6, "soliciting

TABLE 4.41

T TESTS OF FACTOR SCORES OF MEASURES ACCEPTABLE IN PRINCIPLE FOR DEALING WITH FINANCIAL CONSTRAINT CLASSIFIED BY FAIR FINANCIAL TREATMENT OF THE DEPARTMENT IN THE PAST FIVE YEARS

FACTOR	NO MEAN (N=906)	YES MEAN (N=483)	*t* VALUE*
1. Salaries and positions	1.81	2.00	-5.33
3. Facilities and equipment/faculty support	2.39	2.47	-2.52
5. Abolishment of positions and programs	3.62	3.71	-2.50
6. Soliciting support groups	4.06	3.99	2.24
9. Deficit financing	2.77	2.56	5.03
11. Incentives for reducing faculty	3.17	3.25	-2.13

*Significant at the 0.05 level.
Ns reported are maximums.
The scale for the means is as follows: 1 = very unacceptable; 2 = unacceptable; 3 = neutral/uncertain; 4 = acceptable; 5 = very acceptable.

support groups," respondents who believed their departments had not been treated fairly, financially, over the past five years considered these measures significantly more acceptable than did respondents who believed their departments had been fairly treated, financially, over the past five years. With regard to factor 9, "deficit financing," respondents who believed their departments had been fairly treated, financially, over the past five years considered these measures significantly less acceptable than did respondents who believed their departments had not been fairly treated, financially, over the past five years. On the remaining five factors, no significant differences were identified.

Generally, the acceptability in principle of measures for dealing with financial constraint varied to some extent by whether or not the respondents believed their departments had been fairly treated, financially, over the past five years. Often respondents who believed their departments had not been fairly treated, financially, over the past five years were more extreme in their acceptance or non-acceptance of these measures for dealing with financial constraint than were respondents who believed their departments had been fairly treated, financially, over the past five years.

Responses by Institutional Accumulated Operating Budget Surplus

Table 4.42 reports the significant differences identified in *t* tests of the acceptability in principle of measures for dealing with financial

TABLE 4.42

T TESTS OF FACTOR SCORES OF MEASURES ACCEPTABLE IN PRINCIPLE FOR DEALING WITH FINANCIAL CONSTRAINT CLASSIFIED BY INSTITUTIONAL ACCUMULATED OPERATING BUDGET SURPLUS

FACTOR	NO MEAN (N=1169)	YES MEAN (N=210)	*t* VALUE*
1. Salaries and positions	1.90	1.76	3.14
2. Program development	4.10	4.01	2.24
9. Deficit financing	2.68	2.83	-2.47

*Significant at the 0.05 level.
Ns reported are maximums.
The scale for the means is as follows: 1 = very unacceptable; 2 = unacceptable; 3 = neutral/uncertain; 4 = acceptable; 5 = very acceptable.

constraint classified by institutional accumulated operating budget surplus. Respondents were asked to respond "no" or "yes" to whether they believed their institution currently had a substantial accumulated surplus in its operating budget. Of the 11 factors, only three were identified as having significant differences. With regard to factor 1, "salaries and positions," respondents who believed their institutions did have a substantial accumulated surplus in their operating budgets considered these measures significantly less acceptable than did respondents who believed their institutions did not have a substantial accumulated surplus in their operating budgets. With regard to factor 2, "program development," respondents who believed their institutions did not have a substantial accumulated surplus in their operating budgets considered these measures significantly more acceptable than did respondents who believed their institutions did have a substantial accumulated surplus in their operating budgets. With regard to factor 9, "deficit financing," respondents who believed their institutions did not have a substantial accumulated surplus in their operating budgets considered these measures significantly less acceptable than did respondents who believed their institutions did have a substantial accumulated surplus in their operating budgets. On the remaining eight factors, no significant differences were identified.

Generally, the acceptability in principle of measures for dealing with financial constraint varied little by whether or not the respondents believed their institutions currently had a substantial accumulated surplus in their operating budgets.

Responses by Support of Institutional Mission

Table 4.43 reports the significant differences identified in the one-way analysis of variance of the acceptability in principle of measures for dealing with financial constraint classified by support of institutional mission. Respondents used a five-point scale on which 1 = "strongly disagree" and 5 = "strongly agree" to indicate their support for the mission of their institution. Since only 2.6 percent of the respondents "strongly disagreed" and only 3.6 percent of the respondents "disagreed," these two groups were combined for purposes of analyzing the data. Of the 11 factors, five were identified as having significant differences. With regard to factor 2, "program development," respondents who "strongly agreed" with the mission of their institutions considered these measures significantly more acceptable than did respondents who "strongly disagreed" or "disagreed," were "neutral/uncertain" or who "agreed" with the mission of their institutions. Also with regard to factor 2, respondents who "agreed" with the mission of their institutions considered these measures significantly more acceptable than did respondents who were "neutral/uncertain" about their support for the mission of their institutions. With regard to factor 4, "budget reductions

TABLE 4.43

ONE-WAY ANALYSIS OF VARIANCE OF FACTOR SCORES OF MEASURES ACCEPTABLE IN PRINCIPLE FOR DEALING WITH FINANCIAL CONSTRAINT CLASSIFIED BY SUPPORT OF THE MISSION OF THE INSTITUTION

FACTOR	MEANS							Intergroup Differences
	Overall	G1	G2	G3	G4	G5	F Prob.	
2. Program development	4.09	--	4.00	3.92	4.08	4.17	0.00	5>3, 5>2, 5>4, 4>3
4. Budget reductions for support services	2.90	--	2.97	3.01	2.92	2.81	0.00	3>5, 4>5
5. Abolishment of positions and programs	3.65	--	3.55	3.46	3.65	3.74	0.00	5>3, 4>3
6. Soliciting support groups	4.04	--	4.05	3.90	4.01	4.13	0.00	5>3, 5>4
10. Conservation measures	4.09	--	4.11	3.90	4.09	4.17	0.00	5>3, 4>3

G2 = strongly disagree or disagree; G3 = neutral/uncertain; G4 = agree; G5 = strongly agree.
The scale for the means is as follows: 1 = very unacceptable; 2 = unacceptable; 3 = neutral/uncertain; 4 = acceptable; 5 = very acceptable.

for support services," respondents who "strongly agreed" with the mission of their institutions considered these measures significantly less acceptable than did respondents who "agreed" with, or were "neutral/ uncertain" about, the mission of their institutions. With regard to factor 5, "abolishment of positions and programs" and factor 10, "conservation measures," respondents who "strongly agreed" or "agreed" with the mission of their institutions considered these measures significantly more acceptable than did respondents who were "neutral/uncertain" about the mission of their institutions. With regard to factor 6, "soliciting support groups," respondents who "strongly agreed" with the mission of their institutions considered these measures significantly more acceptable than did respondents who "agreed" with, or were "neutral/uncertain" about, the mission of their institutions. On the remaining six factors, no significant differences were identified.

Generally, the acceptability in principle of measures for dealing with financial constraint varied somewhat by whether or not the respondents supported the mission of their institutions, especially by those who "strongly agreed" with the mission of their institutions.

Responses by President's Support of Institutional Mission

Table 4.44 reports the significant differences identified in the one-way analysis of variance of the acceptability in principle of measures for dealing with financial constraint classified by President's support of

TABLE 4.44

ONE-WAY ANALYSIS OF VARIANCE OF FACTOR SCORES OF MEASURES ACCEPTABLE IN PRINCIPLE FOR DEALING WITH FINANCIAL CONSTRAINT CLASSIFIED BY THE PRESIDENT'S SUPPORT OF THE MISSION OF THE INSTITUTION

FACTOR		MEANS							Intergroup Differences
		Overall	G1	G2	G3	G4	G5	F Prob.	
1.	Salaries and positions	1.88	--	1.66	1.80	1.94	1.90	0.00	4>2, 4>3, 5>2
2.	Program development	4.09	--	3.89	4.03	4.08	4.18	0.00	5>2, 5>3, 5>4, 4>2
4.	Budget reductions for support services	2.90	--	3.01	2.98	2.91	2.81	0.00	2>5, 3>5
5.	Abolishment of positions and programs	3.65	--	3.60	3.55	3.67	3.72	0.01	5>3
9.	Deficit financing	2.70	--	2.77	2.80	2.70	2.59	0.00	3>5
10.	Conservation measures	4.09	--	4.06	3.98	4.10	4.16	0.03	5>3

G2 = strongly disagree or disagree; G3 = neutral/uncertain; G4 = agree; G5 = strongly agree.
The scale for the means is as follows: 1 = very unacceptable; 2 = unacceptable; 3 = neutral/uncertain; 4 = acceptable; 5 = very acceptable.

institutional mission. Respondents used a five-point scale on which 1 = "strongly disagree" and 5 = "strongly agree" to indicate their perceptions of the President's support of the missions of their institutions. Since only 3.2 percent of the respondents "strongly disagreed" and only 4.4 percent "disagreed," these two groups were combined for purposes of analyzing the data. Of the 11 factors, six were identified as having significant differences. With regard to factor 1, "salaries and positions," respondents who "strongly disagreed" or "disagreed" that their Presidents support the missions of their institutions considered these measures significantly less acceptable than did respondents who "agreed" or "strongly agreed" that their Presidents support the missions of their institutions. Also with regard to factor 1, respondents who were "neutral/uncertain" that their Presidents support the missions of their institutions considered these measures significantly less acceptable than did respondents who "agreed" that their Presidents support the missions of their institutions. With regard to factor 2, "program development," respondents who "strongly agreed" that their Presidents support the missions of their institutions considered these measures significantly more acceptable than did respondents who "strongly disagreed" or "disagreed,"were "neutral/ uncertain" or "agreed" that their Presidents support the missions of their institutions. Also with regard to factor 2, respondents who "agreed" that their Presidents support the missions of their institutions considered these measures significantly more acceptable than did respondents who "strongly disagreed" or "disagreed" that their Presidents support the missions of their institutions. With regard to factor 4, "budget reductions for support services" and factor 9, "deficit financing," respondents who "strongly agreed" that their Presidents support the missions of their institutions considered these measures significantly less acceptable than did respondents who were "neutral/uncertain" that their Presidents support the missions of their institutions. Also with regard to factor 4, respondents who "strongly agreed" that their Presidents support the missions of their institutions considered these measures significantly less acceptable than did respondents who "strongly disagreed" or "disagreed" that their Presidents support the missions of their institutions. With regard to factor 5, "abolishment of positions and programs" and factor 10, "conservation measures," respondents who "strongly agreed" that their Presidents support the missions of their institutions considered these measures significantly more acceptable than did respondents who were "neutral/uncertain" that their Presidents support the missions of their institutions. On the remaining five factors, no significant differences were identified.

Generally, the acceptability in principle of measures for dealing with financial constraint varied somewhat by whether or not the respondents perceived the Presidents to support the missions of their institutions, especially by those respondents who perceived that the Presidents "strongly agreed" with the missions of their institutions.

Responses by Confidence in the President to Effectively Manage Financial Constraint

Table 4.45 reports the significant differences in the one-way analysis of variance of the acceptability in principle of measures for dealing with financial constraint classified by confidence in the President to effectively manage financial constraint. Respondents used a five-point scale on which 1 = "strongly disagree" and 5 = "strongly agree" to indicate their confidence in the Presidents of their institutions to effectively manage financial constraint. Of the 11 factors, five were identified as having significant differences. With regard to factor 1, "salaries and positions," respondents who "strongly disagreed" that their Presidents could effectively manage financial constraint considered these measures significantly less acceptable than did respondents who were "neutral/ uncertain," "agreed" or "strongly agreed" that their Presidents could effectively manage financial constraint. Also with regard to factor 1, respondents who "disagreed" that their Presidents could effectively manage financial constraint considered these measures significantly less acceptable than did respondents who "agreed" that their Presidents could effectively manage financial constraint. With regard to factor 2, "program development," respondents who "strongly agreed" that their

TABLE 4.45

ONE-WAY ANALYSIS OF VARIANCE OF FACTOR SCORES OF MEASURES ACCEPTABLE IN PRINCIPLE FOR DEALING WITH FINANCIAL CONSTRAINT CLASSIFIED BY CONFIDENCE IN THE PRESIDENT TO EFFECTIVELY MANAGE FINANCIAL CONSTRAINT

FACTOR		MEANS							Intergroup Differences
		Overall	G1	G2	G3	G4	G5	F Prob.	
1.	Salaries and positions	1.88	1.64	1.80	1.86	1.97	1.95	0.00	4›1, 4›2, 5›1, 3›1
2.	Program development	4.08	3.97	4.03	4.07	4.11	4.22	0.00	5›1, 5›2, 5›3
4.	Budget reductions for support services	2.91	2.96	2.98	2.99	2.81	2.78	0.00	3›5, 3›4, 2›4
9.	Deficit financing	2.70	2.83	2.78	2.74	2.65	2.47	0.00	1›5, 2›5, 3›5
10.	Conservation measures	4.10	4.13	4.01	4.06	4.12	4.25	0.05	5›2

G1 = strongly disagree; G2 = disagree; G3 = neutral/uncertain; G4 = agree; G5 = strongly agree.
The scale for the means is as follows: 1 = very unacceptable; 2 = unacceptable; 3 = neutral/uncertain; 4 = acceptable; 5 = very acceptable.

Presidents could effectively manage financial constraint considered these measures significantly more acceptable than did respondents who "strongly disagreed," "disagreed" or were "neutral/uncertain" that their Presidents could effectively manage financial constraint. With regard to factor 4, "budget reductions for support services," respondents who "strongly agreed" or "agreed" that their Presidents could effectively manage financial constraint considered these measures significantly less acceptable than did respondents who were "neutral/uncertain" that their Presidents could effectively manage financial constraint. Also with regard to factor 4, respondents who "agreed" that their Presidents could effectively manage financial constraint considered these measures significantly less acceptable than did respondents who "disagreed" that their Presidents could effectively manage financial constraint. With regard to factor 9, "deficit financing," respondents who "strongly agreed" that their Presidents could effectively manage financial constraint considered these measures significantly less acceptable than did respondents who "strongly disagreed," "disagreed" or were "neutral/ uncertain" that their Presidents could effectively manage financial constraint. With regard to factor 10, "conservation measures," respondents who "strongly agreed" that their Presidents could effectively manage financial constraint considered these measures significantly more acceptable than did respondents who "disagreed" that their Presidents could effectively manage financial constraint. On the remaining six factors, no significant differences were identified.

Generally, the acceptability in principle of measures for dealing with financial constraint varied somewhat by whether or not the respondents had confidence in their Presidents to effectively manage financial constraint. Respondents who "strongly agreed" that their presidents could effectively manage financial constraint were the more conservative in their measures for dealing with financial constraint.

The Relationship Between the Perceived Impact of Financial Constraint and the Acceptability in Principle of Measures for Dealing with Financial Constraint

Two hundred and nine Pearson correlation coefficients were calculated for the 19 variables measuring the perceived impact of financial constraint and the 11 factors measuring the acceptability in principle of measures for dealing with financial constraint. Table 4.46 reports these 209 coefficients, of which 89 were identified as significant at the 0.05 level or lower. In what follows, the pattern of these significant correlations is delineated. The maximum number of correlations possible for each of the 11 factors is 19. Of the 89 significant correlation coefficients, the highest correlation coefficient was only 0.24.

Three of the factors revealed a persistent pattern of correlations. Factor 1, "salaries and positions," correlated significantly with the

TABLE 4.46

PEARSON CORRELATION COEFFICIENTS BETWEEN VARIABLES MEASURING THE PERCEIVED IMPACT OF FINANCIAL CONSTRAINT AND FACTOR SCORES OF MEASURES ACCEPTABLE IN PRINCIPLE FOR DEALING WITH FINANCIAL CONSTRAINT

ITEM	FACTORS										
	1	2	3	4	5	6	7	8	9	10	11
SECTION A											
21. Faculty generally perceive financial constraint at my institution as a significant problem.	**-.19**	**.06**	**-.07**	-.01	.04	**.18**	-.03	-.01	**.11**	.03	.01
22. I view financial constraint at my institution as a significant problem.	**-.21**	**.06**	**-.08**	.01	.02	**.19**	.00	.00	**.17**	.01	-.02
23. The situation of financial constraint at my institution will probably last for at least another three years.	**-.12**	**.09**	-.04	.02	**.06**	**.06**	**.10**	.03	.03	.00	-.04
24. The government will probably increase the funding of my institution next year by more than the rate of inflation.	**.15**	**-.07**	**.10**	.05	-.04	-.04	.01	-.01	.01	.00	**.09**

KEY:
Pearson correlation coefficients in **bold** are significant at the 0.05 level.
N varied from 1351 to 1423 because of pairwise deletion of missing cases.
In Section A, the scale is as follows: 1 = strongly disagree; 2 = disagree; 3 = neutral/uncertain; 4 = agree; 5 = strongly agree.
In Sections B&C, the scale is as follows: 1 = very negative; 2 = negative; 3 = neutral/uncertain; 4 = positive; 5 = very positive.
In Section D, the scale is as follows: 1 = decrease greatly; 2 = decrease; 3 = have no effect on; 4 = increase; 5 = increase greatly.
Factor 1 = "salaries and positions"; Factor 2 = "program development"; Factor 3 = "facilities and equipment/faculty support"; Factor 4 = "budget reductions for support services"; Factor 5 = "abolishment of positions and programs"; Factor 6 = "soliciting support groups"; Factor 7 = "revenue enhancement"; Factor 8 = "discontinuance of programs"; Factor 9 = "deficit financing"; Factor 10 = "conservation measures"; Factor 11 = "incentives for reducing faculty"

TABLE 4.46 (Continued)

PEARSON CORRELATION COEFFICIENTS BETWEEN VARIABLES MEASURING THE PERCEIVED IMPACT OF FINANCIAL CONSTRAINT AND FACTOR SCORES OF MEASURES ACCEPTABLE IN PRINCIPLE FOR DEALING WITH FINANCIAL CONSTRAINT

ITEM	FACTORS										
	1	2	3	4	5	6	7	8	9	10	11
SECTION B											
25. The impact of financial constraint at my institution on the quality of instruction is generally ______.	**.24**	.01	**.06**	**-.08**	-.02	**-.15**	.02	**.07**	**-.10**	**-.06**	.01
26. The impact of financial constraint at my institution on faculty morale is generally ______.	**.22**	-.02	.03	**-.06**	-.04	**-.17**	-.00	.05	**-.10**	-.04	.02
27. The impact of financial constraint at my institution on the socio-economic status of faculty is generally ______.	**.23**	.00	.04	**-.06**	-.10	**-.16**	-.03	.02	**-.14**	-.05	-.02
28. The impact of financial constraint at my institution on the achievement of faculty career aspirations is generally ______.	**.15**	-.03	.04	**-.05**	.02	**-.16**	-.10	.02	**-.13**	**-.09**	.01
29. The impact of financial constraint at my institution on the efficient use of resources is generally ______.	**.12**	.04	**.10**	-.01	**.08**	**-.10**	**.09**	.03	**-.17**	.01	.02
30. The impact of financial constraint at my institution on the overall effectiveness of academic staff is generally ______.	**.21**	-.00	**.09**	-.05	.03	**-.14**	.04	**.06**	**-.12**	-.07	.00
31. The impact of financial constraint at my institution on the consideration of priorities is generally ______.	**.18**	.02	**.11**	-.03	.04	**-.09**	.04	.05	**-.13**	-.03	.05

See previous and following pages for the key to this Table.

TABLE 4.46 (Continued)

PEARSON CORRELATION COEFFICIENTS BETWEEN VARIABLES MEASURING THE PERCEIVED IMPACT OF FINANCIAL CONSTRAINT AND FACTOR SCORES OF MEASURES ACCEPTABLE IN PRINCIPLE FOR DEALING WITH FINANCIAL CONSTRAINT

ITEM	FACTORS										
	1	2	3	4	5	6	7	8	9	10	11
SECTION C											
32. The impact of financial constraint at my institution on the quality of instruction that I am able to provide is ______.	**.20**	-.00	.03	**-.07**	-.01	**-.13**	.03	.02	**-.11**	-.03	-.03
33. The impact of financial constraint at my institution on my morale is ______.	**.22**	.02	.00	**-.08**	.00	**-.15**	-.00	.04	**-.19**	.02	-.01
34. The impact of financial constraint at my institution on my socio-economic status is ______.	**.22**	.01	.00	-.07	.01	**-.10**	-.04	.04	**-.14**	-.03	-.01
35. The impact of financial constraint at my institution on the achievement of my career aspirations is ______.	**.16**	-.05	**.06**	**-.06**	.00	**-.12**	-.03	.04	**-.12**	-.04	.00

KEY:
Pearson correlation coefficients in **bold** are significant at the 0.05 level.
N varied from 1351 to 1423 because of pairwise deletion of missing cases.
In Section A, the scale is as follows: 1 = strongly disagree; 2 = disagree; 3 = neutral/uncertain; 4 = agree; 5 = strongly agree.
In Sections B&C, the scale is as follows: 1 = very negative; 2 = negative; 3 = neutral/uncertain; 4 = positive; 5 = very positive.
In Section D, the scale is as follows: 1 = decrease greatly; 2 = decrease; 3 = have no effect on; 4 = increase; 5 = increase greatly.
Factor 1 = "salaries and positions"; Factor 2 = "program development"; Factor 3 = "facilities and equipment/faculty support"; Factor 4 = "budget reductions for support services"; Factor 5 = "abolishment of positions and programs"; Factor 6 = "soliciting support groups"; Factor 7 = "revenue enhancement"; Factor 8 = "discontinuance of programs"; Factor 9 = "deficit financing"; Factor 10 = "conservation measures"; Factor 11 = "incentives for reducing faculty"

TABLE 4.46 (Concluded)

PEARSON CORRELATION COEFFICIENTS BETWEEN VARIABLES MEASURING THE PERCEIVED IMPACT OF FINANCIAL CONSTRAINT AND FACTOR SCORES OF MEASURES ACCEPTABLE IN PRINCIPLE FOR DEALING WITH FINANCIAL CONSTRAINT

ITEM	FACTORS										
	1	2	3	4	5	6	7	8	9	10	11
SECTION D											
36. The impact of financial constraint at my institution is generally to ______ voluntary service activities.	**.09**	.03	-.01	**-.09**	-.03	**-.08**	**-.07**	.01	**-.06**	**-.06**	-.02
37. The impact of financial constraint at my institution is to ______ my voluntary service activities.	**.17**	.02	**.06**	**-.07**	.03	**-.09**	-.02	.02	**-.09**	-.05	-.01
38. The impact of financial constraint on faculty at my institution is generally to ______ their outside employment.	-.03	**.13**	.04	**.07**	.02	**.11**	**.10**	.03	.03	.04	**.06**
39. The impact of financial constraint at my institution is to ______ my outside employment.	-.03	**.11**	.03	**.12**	.01	.04	**.08**	.02	.04	.03	.04

KEY:

Pearson correlation coefficients in **bold** are significant at the 0.05 level.

N varied from 1351 to 1423 because of pairwise deletion of missing cases.

In Section A, the scale is as follows: 1 = strongly disagree; 2 = disagree; 3 = neutral/uncertain; 4 = agree; 5 = strongly agree.

In Sections B&C, the scale is as follows: 1 = very negative; 2 = negative; 3 = neutral/uncertain; 4 = positive; 5 = very positive.

In Section D, the scale is as follows: 1 = decrease greatly; 2 = decrease; 3 = have no effect on; 4 = increase; 5 = increase greatly.

Factor 1 = "salaries and positions"; Factor 2 = "program development"; Factor 3 = "facilities and equipment/faculty support"; Factor 4 = "budget reductions for support services"; Factor 5 = "abolishment of positions and programs"; Factor 6 = "soliciting support groups"; Factor 7 = "revenue enhancement"; Factor 8 = "discontinuance of programs"; Factor 9 = "deficit financing"; Factor 10 = "conservation measures"; Factor 11 = "incentives for reducing faculty"

perceived impact of financial constraint 17 times. The highest correlation was 0.24 with item 25. Factor 6, "soliciting support groups," correlated significantly with the perceived impact of financial constraint 17 times. The highest correlation was 0.19 with item 22. Factor 9, "deficit financing," correlated significantly with the perceived impact of financial constraint 15 times. The highest correlation was -0.19 with item 33.

Two additional factors revealed a lesser degree of correlation. Factor 4, "budget reductions for support services," correlated significantly with the perceived impact of financial constraint 11 times. The highest correlation was 0.12 with item 39. Factor 3, "facilities and equipment/ faculty support" correlated significantly with the perceived impact of constraint nine times. The highest correlation was 0.11 with item 31.

None of the remaining factors revealed a persistent pattern of correlations. Each of the remaining factors correlated with the perceived impact of financial constraint six or fewer times. Factor 2, "program development,"had six correlations; Factor 7, "revenue enhancement" had five correlations; Factor 10, "conservation measures" had three correlations; and Factor 5, "abolishment of positions and programs," Factor 8, "discontinuance of programs" and Factor 11, "incentives for reducing faculty" each had only two significant correlations.

The results indicated that there was a relationship between the variables measuring the perceived impact of financial constraint and three of the 11 factors, namely Factor 1, Factor 6 and Factor 9, but the correlation coefficients were all low.

Factor 1, "salaries and positions," was positively related to 14 variables measuring the perceived impact of financial constraint and negatively related to three variables. For example, "salaries and positions" was positively related to "the impact of financial constraint at my institution on my socio-economic status" (item 34). In other words, as the respondents' views of the impact of financial constraint on their individual socio-economic status grew more negative, the acceptability of the "salaries and positions" measures (such as salary freeze, a salary decrease, or a workload increase) decreased. As another example, "salaries and positions" was negatively related to "the situation of financial constraint at my institution will probably last for at least another three years" (item 23). As the perception of the permanence of financial constraint increased, the acceptability of the "salaries and positions" measures decreased.

Factor 6, "soliciting support groups," was positively related to four variables measuring the perceived impact of financial constraint and negatively related to 13 variables. For example, "soliciting support groups" was positively related to the perception that "faculty generally perceive financial constraint at my institution as a significant problem" (item 21). As the perception of the seriousness of financial constraint increased, so did the acceptability of "soliciting support groups." As another example, "soliciting support groups" was negatively related to "the impact of financial constraint at my institution on the quality of instruction generally" (item 25). As the perception of the impact of financial constraint on the quality of instruction grew more negative, the acceptability of "soliciting support groups" increased.

Factor 9, "deficit financing," was positively related to two variables measuring the perceived impact of financial constraint and negatively related to 13 variables. For example, "deficit financing" was positively related to "I view financial constraint at my institution as a significant problem" (item 22). As the respondents' views of the seriousness of financial constraint increased, so did the acceptability of "deficit financing." Again, "deficit financing" was negatively related to "the impact of financial constraint at my institution on the efficient use of resources generally" (item 29). As the perception of the impact of financial constraint on the efficient use of resources grew more negative, the acceptability of "deficit financing" increased.

Factor 4, "budget reductions for support services" was positively related to two variables measuring the perceived impact of financial constraint and negatively related to nine variables. Factor 3, "facilities and equipment/faculty support" was positively related to seven variables measuring the perceived impact of financial constraint and negatively related to two variables.

The two most general items measuring the perceived impact of financial constraint are items 21 and 22. The perceived impact of financial constraint, as measured by items 21 and 22, was positively related to Factor 6, "soliciting support groups" and Factor 9, "deficit financing" and negatively related to Factor 1, "salaries and positions."

Generally, there was no strong relationship between the perceived impact of financial constraint and acceptability in principle of measures for dealing with financial constraint.

The Relative Financial Constraint at the Colleges and Technical Institutes Between 1984 and 1989

The relative financial constraint has been defined for this study as the percentage change in real operating dollars expended per student for the five-year period 1984-85 to 1988-89. The calculation of the relative financial constraint has been on a provincial basis. The total operating expenditures for the public colleges and public technical institutes in each province were obtained for the academic years 1984-85 and 1988-89 from the provincial education ministries in Alberta, British Columbia, Manitoba and Saskatchewan. In Alberta and British Columbia the numbers of full-time equivalent students (FTEs) were obtained from the provincial ministries. The provincial ministries in Manitoba and Saskatchewan do not define a FTE student, so the total enrollments were obtained. All enrollment data includes both full-time and part-time students. Within each province, the relative financial constraint can be calculated even if the basis for counting enrollments varies between provinces. As long as the same method and same definition was used within each province to assess enrollments for the academic years 1984-85 and 1988-89, the relative financial constraint can be determined. The total operating expenditures for the academic years 1984-85 and 1988-89 were indexed to 1980-81 dollars using the Canadian All-Items Consumer Price Index (CPI) and the Ontario University Non Salary Price Index (OUNSPI).

Table 4.47 reports the indexed total operating expenditures per student for public colleges and public technical institutes by province for the years 1984-85 and 1988-89 based on 1980-81 dollars. Table 4.47 indicates that over this five-year period, the indexed total operating expenditures per student decreased the most in Alberta, followed by Manitoba and British Columbia, and actually increased in Saskatchewan. Over this five-year period, the nominal funding increased by 23.3% in Alberta, by 23.6% in British Columbia, by 29.5% in Manitoba and by 49.4% in Saskatchewan. Using the Canadian All-Items Consumer Price Index to obtain 1980-81 dollar values, the indexed funding over this five-year period increased by 4.6% in Alberta, by 4.8% in British Columbia, by 9.8% in Manitoba and by 26.7% in Saskatchewan. If the Ontario

TABLE 4.47

TOTAL OPERATING EXPENDITURES PER STUDENT BY PROVINCE IN PUBLIC COLLEGES AND TECHNICAL INSTITUTES IN 1984-85 AND 1988-89, IN 1980-81 DOLLARS

			1980/81 Dollars (CPI)		1980/81 Dollars (OUNSPI)	
	NUMBER OF STUDENTS	TOTAL OPERATING DOLLARS/YEAR (000s)	Total $/Yr (000s)	$/student	Total $/Yr (000s)	$/student
ALBERTA						
1988-89	46,055*	368,223	233,053	5,060*	232,025	5,038*
1984-85	33,128*	298,524	222,779	6,725*	214,765	6,483*
Increase (%)	39.0	23.3	4.6	(24.8)	8.0	(22.3)
BRITISH COLUMBIA						
1988-89	50,350*	389,617	246,593	4,898*	245,505	4,876*
1984-85	46,075*	315,222	235,240	5,106*	226,778	4,922*
Increase (%)	9.3	23.6	4.8	(4.1)	8.3	(0.9)
MANITOBA						
1988-89	39,065	67,610	42,791	1,095	42,602	1,091
1984-85	32,638	52,224	38,973	1,194	37,571	1,151
Increase (%)	19.7	29.5	9.8	(8.3)	13.4	(5.2)

TABLE 4.47 (Concluded)

TOTAL OPERATING EXPENDITURES PER STUDENT BY PROVINCE IN PUBLIC COLLEGES AND TECHNICAL INSTITUTES IN 1984-85 AND 1988-89, IN 1980-81 DOLLARS

			1980/81 Dollars (CPI)		1980/81 Dollars (OUNSPI)	
	NUMBER OF STUDENTS	TOTAL OPERATING DOLLARS/YEAR (000s)	Total $/Yr (000s)	$/student	Total $/Yr (000s)	$/student
SASKATCHEWAN						
1988-89	74,489	127,345	80,598	1,082	80,243	1,077
1984-85	105,623	85,265	63,631	603	61,342	581
Increase (%)	(29.5)	49.4	26.7	79.3	30.8	85.4

*Full-time equivalent students.

CPI - Canadian All-Items Consumer Price Index: 1984-85 = 134.0
1988-89 = 158.0

OUNSPI - Ontario University Non-Salary Price Index: 1984-85 = 139.0
1988-89 = 158.7

Number of students includes both full-time and part-time.

Data provided by Ministry/Department officials in each province.

University Non Salary Price Index is used to obtain the 1980-81 dollar values, the indexed funding over the five-year period increased by 8.0% in Alberta, by 8.3% in British Columbia, by 13.4% in Manitoba and by 30.8% in Saskatchewan. However, most of the variation in the total operating expenditures per student occurs because of the wide variation in student enrollments between the provinces. Over the five-year period, 1984-85 to 1988-89, Alberta had an increase of 39.0% in its total FTE enrollments, British Columbia had an increase of 9.3% in its FTE enrollments, Manitoba had an increase of 19.7% in its total enrollments and Saskatchewan had a decrease of 29.5% in its total enrollments. As a result of this wide variation in student enrollments between the provinces, the relative financial constraint also varies greatly between the provinces. Using the Canadian All-Items Consumer Price Index for the period 1984-85 to 1988-89, Alberta recorded a reduction in real operating dollars expended per student of 24.8%; British Columbia a reduction of 4.1%; Manitoba a reduction of 8.3% and Saskatchewan an increase of 79.7%. When the Ontario University Non Salary Price Index was used, Alberta recorded a reduction in real operating dollars expended per student of 22.3%; British Columbia a reduction of 0.9%; Manitoba a reduction of 5.2% and Saskatchewan an increase of 85.4%.

By using the indexed total operating expenditures per student to measure the relative financial constraint, a large variation in the relative financial constraint occurs between the provinces for the five-year period 1984-85 to 1988-89. Since the real funding increased in all provinces, the large variation in provincial enrollments caused most of the variation in the relative financial constraint. It seems that Alberta was able to absorb larger enrollment increases, probably by enlarging class sizes, than the other provinces. During the years 1983 to 1986, British Columbia experienced severe financial retrenchment which probably reduced the province's capacity to absorb more students. Manitoba, with an enrollment increase of 19.7%, also experienced an increase of real funding during this five-year period. In 1987-88, Saskatchewan had a policy change that required 100% cost recovery in non-credit and community programming. According to Saskatchewan Education, this policy change was the main cause of the large decrease in total enrollments between 1984-85 and 1988-89. However, the full-time enrollment at the Saskatchewan technical institute also dropped from 7,500 in 1984-85 to 6,500 in 1988-89.

Overall, there was a wide variation in the relative financial constraint between the provinces. Alberta experienced the greatest relative financial constraint, followed by Manitoba and British Columbia. Saskatchewan experienced the least relative financial constraint, with a large increase in real total operating expenditures per student because of a large drop in student enrollments between 1984-85 and 1988-89.

The Relationship Between the Perceived Impact of Financial Constraint and the Relative Financial Constraint at Public Colleges and Technical Institutes between 1984 and 1989

On a provincial basis, faculty members at institutions in British Columbia were the most negative about the perceived impact of financial constraint. Faculty members at institutions in Saskatchewan were also more negative about the perceived impact of financial constraint than were faculty members from institutions in Alberta and Manitoba. Table 4.47 shows that for the five-year period 1984-85 to 1988-89, Alberta experienced the most relative financial constraint, followed by Manitoba. Therefore, the perceived impact of financial constraint by faculty members at institutions within a province did not correlate positively with the relative financial constraint within the province during this five-year period.

Summary

This chapter presented the statistical findings related to the perceived impact of financial constraint; the group differences with regard to the perceived impact of financial constraint; the acceptability in principle of measures for dealing with financial constraint; the group differences with regard to the acceptability in principle of measures for dealing with financial constraint; the relationship between the perceived impact of financial constraint and the acceptability in principle of measures for dealing with financial constraint; the extent of financial constraint in the colleges and technical institutes between 1984 and 1989; and the relationship between the perceived impact of financial constraint and the actual extent of financial constraint between 1984 and 1989.

Faculty perceived financial constraint as a significant problem at their respective institutions, a problem that would probably last for at least another three years. Faculty did not agree that government would probably increase the funding of their institution next year by more than the rate of inflation. Faculty considered that the impact of financial constraint was negative on the quality of instruction, their morale, their socio-economic status, the achievement of their career aspirations, the efficient use of resources, the overall effectiveness of academic staff and the consideration of priorities. Faculty also perceived that the impact of financial constraint on themselves individually was negative in terms of their individual quality of instruction, their individual morale, their individual socio-economic status and the achievement of their individual career aspirations. In addition, faculty perceived that the impact of financial constraint was to decrease their voluntary service activities and increase their outside employment. Overall, faculty viewed the impact of financial constraint at their institutions as negative.

The perceived impact of financial constraint varied little by administrative position and by institutional accumulated operating budget surplus. The perceived impact of financial constraint varied somewhat by highest academic qualification, by tenure status, by status of appointment, by nature of appointment, by college sector or technical institute sector, by size of institution, by years employed at the institution, by age, by sex, by support of institutional mission and by the President's support of institutional mission. Generally, the impact of financial constraint was considered to be much more negative by faculty with Doctorate or Master's degree, by tenured faculty, by faculty with continuing appointments, by full-time faculty, by faculty who are part of the technical institute sector, by faculty from larger institutions, by faculty employed at their institutions for 10 to 19 years, by faculty 40 to 49 years old, by male faculty, by faculty who did not support the missions of their institutions, and by faculty who believed the Presidents of their institutions did not support the missions of their institutions.

The perceived impact of financial constraint varied considerably by program area, by province, by full-time faculty positions lost by the institution and by the department in the last five years, by fair financial treatment of the institution and of the department in the last five years and by confidence in the President to effectively manage financial constraint. Generally, the impact of financial constraint was considered to be more negative by faculty in university transfer programs, by faculty in British Columbia and Saskatchewan, particularly British Columbia, by faculty who were in institutions or departments that had lost full-time faculty positions in the last five years as a result of financial constraint, by faculty who believed their institutions or departments had not been fairly treated, financially, in the past five years and by faculty who did not have confidence in the Presidents of their institutions to effectively manage financial constraint.

Of the 65 measures for dealing with financial constraint included in the questionnaire, 38 were identified as acceptable or tending to be acceptable in principle, whereas 27 items were identified as unacceptable or tending to be unacceptable in principle.

Of the 38 measures identified as acceptable or tending to be acceptable in principle, 26 were substantive measures and 12 were process measures (items 40, 41, 42, 61, 62, 63, 65, 66, 67, 68, 87 and 88). Of the 26 substantive measures, four (items 43, 45, 46 and 79) were related to lobbying for additional funds and the promotion of the institution's activities. Ten of the substantive measures (items 48, 69, 70, 71, 72, 73, 74, 75, 76 and 77) were related to the expansion or reduction of programming, three were voluntary alternatives to dismissal (items 49, 51 and 52), one was related to a reduction in staff (item 90), two were related to students (items 79, 80), four were associated with ancillary services (items 93, 95, 96 and 102) and two were conservation measures (items 84 and 85).

Of the 27 measures identified as unacceptable or tending to be unacceptable in principle, 25 were substantive measures and two were process measures (items 64 and 86). Nine of the substantive measures were related to the dismissal of personnel (items 89, 91 and 92), the filling of vacant faculty positions (items 54, 55, 56 and 57) or voluntary alternatives to dismissal (items 50 and 53). Four were related to reductions in services provided to faculty (items 98, 99, 100 and 101). Three were related to services available to students (items 81, 94 and 97). Six were related to the general financial management of the institution (items 44, 47, 82 and 83) and a reduction in expenditure for new equipment and facilities (items 103 and 104). Two were related to faculty members ' salaries (items 59 and 60) and one was related to a change in faculty working conditions (item 58).

In order to reduce the data, a factor analysis was conducted of the 65 measures for dealing with financial constraint that were contained in the questionnaire. Eleven factors were identified. Faculty members considered as acceptable "conservation measures," "program development" and "soliciting support groups." Faculty members also tended to consider as acceptable "abolishment of positions and programs." Faculty members tended to consider as neutral or uncertain "discontinuance of programs," "revenue enhancement," "incentives for reducing faculty," "budget reductions for support services" and "deficit financing." Faculty members tended to consider as unacceptable "facilities and equipment/faculty support." Faculty members considered as unacceptable "salaries and positions." The identification of group differences with regard to the acceptability in principle of measures for dealing with financial constraint was based on the factor analysis of the 65 measures for dealing with financial constraint. The acceptability in principle of measures for dealing with financial constraint varied little by tenure status, by status of appointment (continuing or sessional), by nature of appointment (full-time or part-time), by size of institution, by years employed at the institution, by full-time faculty positions lost by the institution and the department in the last five years, by institutional accumulated operating budget surplus, by support of the institutional mission and by confidence in the President to effectively manage financial constraint. The acceptability in principle of measures for dealing with financial constraint varied somewhat by highest academic qualification, by administrative position, by college sector or technical institute sector, by age, by sex, by fair financial treatment of the institution and the department in the last five years, and by the President's support of the institutional mission. If there were significant differences on six or seven of the 11 factors, these variables were considered to vary somewhat in terms of acceptability in principle of measures for dealing with financial constraint. The acceptability in principle of measures for dealing with financial constraint varied considerably by program area and by province. If there were significant differences on eight or more of the 11 factors, these variables were noted to vary considerably in terms of acceptability in principle of measures for dealing with financial constraint. Faculty in university transfer programs were more extreme in their acceptance or non-acceptance of measures for dealing with financial constraint than were faculty from other program areas. Also, faculty in British Columbia were more extreme than faculty in Alberta, Manitoba or Saskatchewan in their acceptance or non-acceptance of measures for dealing with financial constraint.

A very weak relationship was identified between the 19 variables measuring the perceived impact of financial constraint and the 11 factors measuring the acceptability in principle of measures for dealing with financial constraint. Three of the 11 factors revealed a persistent pattern of correlations, although the correlation coefficients were low. The perceived impact of financial constraint was related to the acceptability of "salaries and positions," to the acceptability of "soliciting support groups" and to the acceptability of "deficit financing." To a lesser degree, two additional factors, "budget reductions for support services" and "facilities and equipment/faculty support" also related the perceived impact of financial constraint to the acceptability of these measures for dealing with financial constraint. Overall, the perceived impact of financial constraint was only weakly related to the acceptability in principle of measures for dealing with financial constraint.

The relative financial constraint on a provincial basis was determined in terms of the percentage change of indexed operating expenditures per student between the years 1984-85 and 1988-89. On this basis, Alberta institutions experienced the greatest financial constraint, followed by institutions in Manitoba and British Columbia. Saskatchewan institutions experienced a large increase in real operating dollars spent per student because of a large decrease in the number of students over this five-year period.

No relationship was identified between the perceived impact of financial constraint of faculty and the relative financial constraint experienced within a province. Although faculty from British Columbia, followed by faculty from Saskatchewan, were the most negative about the perceived impact of financial constraint, these provinces experienced less relative financial constraint than did Alberta and Manitoba.

CHAPTER 5
QUALITATIVE FINDINGS

Chapter 5 reports a content analysis of the open-ended comments made by 743 (51.7%) of the respondents. These comments provide additional descriptive data which supplement the statistical data presented in Chapter 4.

These open-ended comments illustrate the range and intensity of opinion among respondents regarding the perceived impact of financial constraint at their colleges and technical institutes and regarding the acceptability of measures for dealing with financial constraint. The comments provide insights, in the respondents' own words, into their feelings of financial constraint.

Perceived Impact of Financial Constraint

This section reports comments relating to the perceived impact of financial constraint.

Financial Constraint as a Significant Problem

Fifty-one faculty members provided written comments with regard to whether financial constraint posed a significant problem at their college or technical institute. About three-fourths of the comments in this category indicated that financial constraint was indeed a serious problem. The following comments illustrate this view:

> Our institute has already cut finances to the bone to give adequate service. Any further cutting anywhere will surely result in total decay of our service, as it just barely stands now.
>
> Our problem is now one of being at the end of the road. Further cuts would be insupportable in any area -- faculty, staff or physical plant without major negative impacts. In fact, unless some relief is forthcoming, existing reserves of energy and goodwill will disappear soon.
>
> Financial restraints are definitely affecting the quality of education.
>
> Now at its worst financial state in my 25 year career.
>
> After eight years of restraint, the college is at its lowest ebb since being founded 20 years ago.

Approximately one-fourth of the comments said that financial constraint was not currently a serious concern. The following comments are representative of this view:

> Generally we seem to be in the best financial shape that we have seen in a long time.
>
> At our college the financial restraints are not as yet severe.
>
> Due to our new status as a university-college, the financial handicap has eased.
>
> Funding was very poor during the restraint period but has improved during the last two years, so everything seems rosy, but what else could it seem when funding was so devastating prior to that time.

Some comments related to the special circumstances relating to a particular college or department:

> A satellite college like ours is even more affected by financial constraint.
>
> My program is different from most -- it is not a quickly changing high technology area, so the constraints haven't been as severe on my department as they are on others.
>
> We're too "young" to feel much impact yet.
>
> We have been given a lot of money to develop third and fourth year degree programs. Our department was increased last year by one-third.

A few comments related to the opportunities afforded during a period of financial constraint:

> Financial constraint is a sign of the times. You can't let it get you down. You must see positive opportunities, keep your head up and put students at the top of the list.
>
> Should we view it (financial constraint) exclusively as a problem or is it an opportunity for wiser, more efficient, more client responsive allocation of resources? The recession of the early 80s forced many large corporations to deal with financial constraint. They cleared out deadwood, streamlined operations, re-focused on client services and emerged the better for it.

Permanence of Financial Constraint

Approximately one-half of the 87 faculty who commented on the permanence of financial constraint thought that financial constraint was likely to continue for the foreseeable future. The following comments illustrate this view:

> I feel the impact of constraints has yet to be felt. I think it will be

> felt as the government tightens funding.
>
> I see more cuts, ultimately relating to reduced Federal transfers and other issues.
>
> The impact has been particularly significant on capital funding and the situation does not appear to be improving at all.
>
> Our department has been short staffed ever since I came to the college -- why would it change now?
>
> No real end in sight.

About one-fifth of the comments said that financial constraint had stabilized at their college or technical institute:

> Both institution and departmental budgets have remained status quo for the last seven years.
>
> Though money is still tight, things are not as desperate as in 1984-86.
>
> Certainly the worst is over but we still feel it.

Approximately one-fifth of the comments, all from respondents from British Columbia, said that financial constraint was over and the institutions were now in a growth phase:

> Please make a note that B.C. is coming out of restraint years. We are expanding our institution and there seems to be money available for all the new initiatives.
>
> Survey is two years too late. Restraint appears to be over here.
>
> Survey would have been more appropriate to us two years ago. We are presently embarking on a period of new growth and expansion.

Quality of Instruction

Most of the 75 faculty commenting on this topic reported that financial constraint has had a negative impact on the quality of instruction. The adverse effect was associated with increased faculty workloads, a lack of equipment and instructional resources, less qualified faculty and attempts to operate the college as a business:

> The ultimate consequence of financial constraint is a dilution in the quality of education offered at an institution.
>
> A major impact of financial constraint (on faculty) is to increase the student contact time, decrease preparation time, and to teach a broader range of subjects. The net effect has been to decrease the quality of instruction and to increase staff burnout and overload.
>
> Quality of teaching is affected by the limited funding for resources and facilities.
>
> I instruct in an equipment-dependent discipline; a lack of equipment for students is the main effect on quality of instruction.
>
> The young, good instructors are leaving and cannot be replaced.
>
> I have seen how it can destroy existing programs by having unqualified, inexperienced personnel come into unfamiliar programs.
>
> The trend is that publicly owned institutions and colleges become more like businesses. Quality of education will suffer if institutions become profit oriented.

A few of the respondents believed they had been able to withstand the pressures of financial constraint without letting these pressures affect the quality of their instruction:

> As a professional, I still provide quality instruction although resources for teaching aids, etc. are scarce.
>
> I'm quite certain that quality of instruction remains high at this institution even under adverse conditions.

Faculty Morale

Four-fifths of the 72 faculty commenting on morale claimed that financial constraint reduces morale. The detrimental effect is reflected in comments associated with low salaries, not having a signed faculty agreement, too many short term employment contracts, incompetent administration, and future uncertainty, especially as it relates to job security:

> Basically the instructors need more money. We have fallen so far behind that morale has fallen to a point of no return.
>
> This has ceased to be a career and is now just a poorly paid job with no hope for improvement.
>
> Staff have been without a contract (or raise) for three years. The question of the effect of constraint on staff morale is very important.
>
> Contract has not been made for three years. Staff are very disgruntled and have voted for a strike.
>
> Many instructors are working under short term contracts for years at a time, which by definition do not lend to good feelings.
>
> The main problem at my institution is morale -- poor administration in all areas.

> Threat of lay-off and lack of job security increase uncertainty and lead to low morale.

Some respondents from the B.C. colleges said that faculty morale improved when financial constraint eased:

> I would have answered this questionnaire differently five years ago. We are now recovering from restraint and morale is good.
>
> Financial restraint is easing in B.C. and things are much better this year, so morale has improved around the college.

One respondent said improved morale was due to an administrative reorganization:

> We have recently had a reorganization of our college, so conditions and morale have improved significantly.

Socio-Economic Status of Faculty

Twelve faculty commented about the effect of financial constraint on their socio-economic status. Three of the respondents said their socio-economic status was not affected by financial constraint because they were a two-income family. This view is exemplified by the following comment:

> I have not experienced a change in socio-economic area because of being a two-salary family.

Three-fourths of the respondents said financial constraint was adversely affecting their socio-economic status and they were trying to supplement their income:

> I have to work two jobs to make ends meet.
>
> My wife had to find employment to supplement my income.
>
> I am teaching a night class to increase my socio-economic status.

Career Aspirations of Faculty

One-half of the 12 comments with regard to the achievement of faculty career aspirations indicated that financial constraint was the reason they were seeking other employment:

> People are upgrading their skills in order to move out or gain more income.
>
> It has caused me to look at leaving the public sector.
>
> Many non-tenured faculty leave for positions offering greater security.

One respondent said:

> New faculty should be made aware that the job will always be teaching (only).

Efficient Use of Resources

Three-fifths of the 87 comments considered that the overall effect of financial constraint on the efficient use of resources was largely detrimental. Many comments related to the improper allocation of resources. Examples of this opinion are:

> In our college, mismanagement of allocated funds is at least as big a problem as constraint itself.

> Financial constraint in this province, however present, is far out ranked by poor utilization of resources and poor management.
>
> Appears to be considerable waste of funds -- lots of money for frills, none for necessities.
>
> Our financial system (budgeting, staffing, purchasing, priorizing, etc.) precludes any opportunity for the efficient use of the resources we do have.

Approximately one-fifth of the comments viewed financial constraint as having a positive effect on the efficient use of resources:

> The college has recently rationalized all its programs to better meet the needs of industry by conducting an industry-wide review of goals. This is making our programs more cost effective, so restraint in this respect has been good.
>
> Financial constraint is positive because priorities must be set to achieve the proper purchase of the most needed equipment.
>
> I think a general reduction in costs in all areas results in faculty and support staff becoming more productive without sacrificing program areas and student needs.

Several respondents made general comments about the efficient use of resources:

> A comprehensive approach to spending and allocating needs to be implemented so that equality of deficit and excess is achieved in all areas.
>
> One must look at things from the point of view of a tax payer as well as an educator.
>
> College committee work is increasing only because it is important to ensure funds are wisely spent. Our college encourages faculty involvement in decision-making.

> It is my perception that it is very difficult to have an extremely cost efficient college that is also "effective."

Overall Effectiveness of Academic Staff

A majority of 18 comments indicated that the effect of financial constraint was detrimental to the overall effectiveness of academic staff. About one-third of the comments said overall effectiveness was reduced because limited funds were causing staff to use their time ineffectively on committees and to gain internal support:

> We are cutting back in areas that directly affect the student. We are overworked with committees, so there isn't time to get the job done we are hired for.
>
> Lack of funds take too much time for infighting for support, which takes away from effective time use of instructor knowledge.

About one-third of the comments indicated that job insecurity is the major factor for lack of effectiveness of academic staff:

> Fear and insecurity is the major factor for lack of effectiveness of academic staff.
>
> Personally, the continuous worry and threat of lay-offs affects my energy level and narrows my effectiveness as an employed person, both at work and in the community.
>
> Financial constraint twists individual behaviors so that self preservation, political activities and competition for funds overshadow educational goals.

One comment said that staff effectiveness could be improved by consulting with the faculty:

> The key to the management of constraint generally, in my opinion, is consultation with those who have to make do with the effects of constraint, the faculty.

Consideration of Priorities

About one-half of the 47 comments dealt with the consideration of priorities within the institution. Generally these comments considered financial constraint to be detrimental towards establishing the correct priorities:

> I'm not really sure that perhaps we don't get enough money but that its uses are prioritized incorrectly.
>
> Our college still spends on the wrong areas, ignoring base programming.
>
> Emphasis on narrow skills training tends to increase in times of restraint.
>
> Floor tiles are more important than laboratories in our place.
>
> ESL (English as a Second Language) is usually considered of lowest priority.

Approximately one-fourth of the comments indicated that education was a low priority of governments and the public:

> Education will not receive the priority rating I think it merits. Society generally has other priorities.
>
> We are told technical education is the lowest educational priority for this government -- behind university and K-12.
>
> Education, at this level, is not a high priority of this government.

> A lack of solid, consistent public support for increased budgets indicates education is not a high priority.

Some comments related to the need to establish institutional priorities:

> Rather than apply cuts across the board, priority needs to be given to down-sizing and cutting some areas and resourcing new initiatives with high potential.

> I suggest a joint task force (faculty, staff, administration) empowered to set priorities in some crucial financial decision-making.

One college established a priority system for cuts, to improve overall effectiveness:

> Our college has set out a priority system for cuts: (1) direct instruction as the highest priority and last affected; (2) support for instruction as the next priority item; and (3) non-instructional is the last priority and most affected by cuts.

A few comments expressed the positive effects of financial constraint on the consideration of priorities:

> Financial constraint has caused us to re-evaluate our priorities and I see this as positive.

> The one possible benefit of a period of constraint is the need to examine priorities and define directions for the future.

Voluntary Service Activities

About one-half of the 18 comments indicated that financial constraint increased the amount of faculty voluntary service activities, especially for the full-time faculty:

> With an increase in the contract faculty who cannot be required to serve on committees, there is an increased demand on regular faculty.
>
> More and more fund raising efforts are being made involving the whole staff.
>
> Since this institution is unionized, restraint causes increases in voluntary committee activity, i.e., grievances, etc.
>
> I serve on committees in order to get teaching resources.

Approximately one-fourth of the respondents said that financial constraint reduced the amount of their voluntary service activities:

> The constraint decreases job specialization, therefore more class preparation of less familiar topic areas and therefore less time for committee service.
>
> People have lost interest, feel demoralized, and do less voluntary work -- also less time for voluntary work.
>
> The continuing tentativeness on the status of my position makes any long range planning difficult at best. Increased commitment to direct instruction leaves decreased time available for non-curricular activities.

Outside Employment

More than one-half of the 80 comments indicated that financial constraint had the effect of increasing the outside employment of faculty, especially the part-time faculty:

> I have had to take on extra night school teaching to stay even economically.

> If I did not work outside the institution, I could not support my family.

> Part-time and short-term faculty are usually scrambling to find other work to augment their incomes.

> Presently to balance the budget, I hold a second job in the evenings and do consulting work during week-ends and holidays.

One-fourth of the comments said financial constraint decreased outside employment of faculty because the increased workload of their faculty position did not leave them with enough time or energy to pursue additional employment:

> Don't have the time or energy to work elsewhere or to look elsewhere for work.

> We are so overloaded that it is difficult to pursue outside employment -- there simply is no energy left over.

> Our workload is so high that no one in my department could possibly consider outside employment.

A few comments indicated that financial constraint had no effect on the amount of outside employment of faculty:

> Individuals take outside employment but I'm sure they would regardless of their earnings here.

> The reasons for outside employment are varied, but are often including professional development.

> To the best of my knowledge, most faculty in our institution are not employed outside the college.

Acceptability Of Measures For Dealing With Financial Constraint

This section reports comments relating to measures for dealing with financial constraint. The comments are reported by item under the headings of the 11 factors developed in Chapter 4. Selected illustrative comments under the headings "for" and "against" are reported for each item loading on each particular factor. If there were no comments "for" or "against" a particular item, the item is omitted. The numbers in brackets indicate the frequency of written comments compiled under the corresponding heading.

Factor 1: Salaries and Positions

Item 59 (N=76): That the institution negotiate a freeze in faculty members' salaries. (For - 0, Against - 72, Other - 4)

Against: Definitely not! Try freezing the administration salaries, that's where the money is.

Item 55 (N=3): That the institution fill vacant positions with sessional appointments. (For - 0, Against - 2, Other - 1)

Against: All of our instructors are part-time and laid off every spring.

Item 57 (N=8): That the institution not appoint new faculty members to permanent positions. (For - 0, Against - 3, Other - 5)

Against: There appears to be a trend to keep staff hired on a temporary contract basis. Such a system leads to low morale and a high turnover of staff.

Item 58 (N=35): That the institution increase the average faculty teaching workload. (For - 0, Against - 35, Other - 0)

Against: We have, as a result of restraint, radically increased workloads to levels that create high stress, low morale, reduced teaching ability and will lead to serious burnout problems in the future.

The comments were very definite in stating that neither a freeze in salary nor an increase in faculty teaching workloads was an acceptable measure for dealing with financial constraint. The majority of the comments about salaries indicated faculty salary increases have been less than the rate of inflation for several years, the salaries were lower than the salaries for comparable industry positions and good faculty can not be employed because of the low salary scale. Respondents from Saskatchewan said they have not had a salary increase, not even a cost of living increase, in four years. All comments about faculty workloads indicated that workloads have been continually increasing because of financial constraint. The increased workload occurred because of larger class sizes, increased instructional hours, more marking, more student advising, increased course preparations and more committee work. This increased workload resulted in reduced instructional quality, less preparation time, less professional development, reduced morale and increased fatigue and burnout.

Factor 2: Program Development

Item 73 (N=7): That the institution expand current programs in high-demand areas. (For - 6, Against - 0, Other - 1)

For: Our institute needs to be actively promoting existing programs.

Item 72 (N=17): That the institution develop new programs in high demand areas. (For - 9, Against - 3, Other - 5)

For: We must now look to expand, especially in areas with high demand.

Against: This "expand at all costs" mentality means that new programs are added without the ability to provide support services. Once these programs are started, they then are ignored in the constant search for further expansion.

Item 48 (N=9): That the institution align its programs more closely with Canada's employment needs. (For - 5, Against - 4, Other - 0)

For: Yes, if the job market benefits of general programs, such as Business Administration, are taken into account.

Against: Not acceptable because "Canada's employment needs" are ill defined and don't necessarily correspond to the college region's employment needs, and neither of these may correspond to the aspirations of the residents of the regions who aspire to attend college.

Item 77 (N=2): That the institution strive to recruit students in programs in which its enrollment is below capacity. (For - 2, Against - 0, Other - 0)

For: I feel that many program areas which are not running at full student capacity, could be full, if concentrated effort was made to promote programs to students, parents, etc. prior to them graduating from high school.

Item 52 (N=28): That the institution provide incentives for retraining of faculty members for high-demand areas within the college or technical institute. (For - 22, Against - 0, Other - 6)

For: Not enough financial support for professional development. i.e. Research for doctoral degree that will benefit the college and the students.

Other: Who gets to define "high demand"?

These comments indicate a general ambivalence of faculty members towards program development during a time of constraint. Some respondents viewed this as an opportunity to expand while others were concerned that program development would adversely affect the operation of existing programs.

Factor 3: Facilities and Equipment/Faculty Support

Item 104 (N=67): That the institution defer the purchase of new equipment. (For - 2, Against - 56, Other - 9)

For: Defer for a period of time and only if the equipment is not essential to the continuation of the program.

Against: The effect of financial constraint in my college has been so severe that the system has been left with a bunch of archaic equipment in computer science, chemistry, biology, and physics. You can imagine the level of education on this equipment.

Item 103 (N=51): That the institution defer repairs and renovations to facilities. (For - 0, Against - 41, Other - 10)

Against: Repairs can be deferred only so long before problems avalanche.

Item 99: That the institution reduce budget allocations for instructional supplies. (For - 0, Against - 20, Other - 3)

Against: We even have to cut down on supplies (e.g., get cheap scotch tape which doesn't tape properly) and cut down on the amount of paper we're allowed to duplicate.

Item 98 (N=22): That the institution reduce budget allocations for the purchase of library materials. (For - 0, Against - 18, Other - 4)

Against: Library staff and facilities are most disastrously affected (by financial constraint).

Item 100 (N=14): That the institution reduce budget allocations for faculty members' academic computing services. (For - 0, Against - 12, Other - 2)

Against: Colleges should be given more funding for computer software and hardware to keep up with the demands of the fast pace set by the computer world.

Item 102 (N=3): That the institution defer the improvement of grounds. (For - 0, Against - 1, Other - 2)

Against: The institution has become dirty and the grounds poorly cared for as the budgets are so low.

The comments indicate that faculty members perceive that there has been a deterioration in instructional quality because of a shortage of funds -- for new equipment, to repair and renovate facilities, to purchase instructional supplies and library materials, and to provide computing services for faculty. Overall, further reductions are viewed as inappropriate.

Factor 4: Budget Reductions for Support Services

Item 92 (N=1): That the institution reduce the budget allocation for the registrar's office. (For - 0, Against - 1, Other - 0)

Against: Because of the expansion mentioned before, our institution has not kept up in many areas, e.g., secretarial services, registrar's office, etc. You can't expand one part and cut back in other areas.

Item 91 (N=16): That the institution reduce budget allocations for secretarial support. (For - 0, Against - 13, Other - 3)

Against: Little financial support is given to the instructional role -- we are overloaded with teaching hours and have no instructional assistants and little secretarial support.

Item 90 (N=87): That the institution reduce the number of administrators. (For - 75, Against - 0, Other - 12)

For: The college functions better when there are less administrators. It is sad to say, but in their misdirected zeal at trying to improve things, they consistently and repeatedly interfere with education. In financial constraint, the first objective should be to reduce the number of administrators to one-tenth of their current numbers.

The remarks indicate that faculty members do not approve of further reductions in secretarial support but they are most agreeable to reducing the number of college administrators.

Factor 5: Abolishment of Positions and Programs

Item 61 (N=10): That the institution terminate the employment of temporary academic staff deemed redundant, after attempting reassignment. (For - 4, Against - 1, Other -5)

For: As long as they are really redundant and their dismissal does not result in an increased workload of others.

Against: I never know if I have a job for more than one year. As well, every year I have different courses to teach. There is no continuity or security to my job. This is hard on morale and limits professional development of staff members.

Item 62 (N=8): That the institution terminate the employment of permanent faculty members deemed redundant, after attempting reassignment. (For - 3, Against - 0, Other - 5)

For: Yes, if the process for "redundancy" determination is approved by faculty.

Item 65 (N=9): That the institution base employment terminations of faculty members deemed redundant on the basis of their qualifications for the remaining programs. (For - 4, Against - 0, Other - 5)

For: O.K. if done by a committee with equal representation of faculty and administration.

Item 67 (N=8): That the institution establish clear guidelines for discontinuing programs. (For - 3, Against - 0, Other - 5)

For: Nobody wants to see cuts or cutbacks, but our government, country, etc. cannot continue to operate irresponsibly, we need to balance the books. If a program will not fly -- it should be shelved.

The comments indicate that the respondents are cautiously supportive of faculty positions being deemed redundant, subject to redundancy procedures that are acceptable to them.

Factor 6: Soliciting Support Groups

Item 43 (N=143): That the institution lobby government for more favourable funding arrangements. (For - 36, Against - 3, Other - 104)

For: The point I would like to make is that educational cutbacks are a result of political decisions. Therefore, the proper response is a political one. This means cutting back where it hurts students.

Against: Given the academic situation, the government treats the college very well.

Item 42 (N=3): That the institution establish a task force to identify various measures to deal with financial constraint. (For - 0, Against - 3, Other - 0)

Against: I think that we have enough task forces in this country already. Task forces cost more money than they will ever save.

Item 40 (N=11): That the institution involve faculty members in the formation of measures to deal with financial constraint. (For - 8, Against - 0, Other - 3)

For: There is insufficient input from staff and faculty re: cutbacks.

Item 41 (N=3): That the institution review its mission as a preliminary step to taking action to deal with financial constraint. (For - 2, Against - 0, Other - 1)

For: Administration needs to plan ahead -- inform faculty and seek input re: coping with less money.

Item 46 (N=4): That the institution utilize publicity campaigns in order to enhance the legitimacy of its activities. (For - 2, Against - 0, Other - 2)

For: The most effective resistance to post-secondary financial restraint in B.C., it seemed to me, was relentless political denunciation of the government by educators, to the point where editorials and public opinion polls consistently reflected public dissatisfaction with government policy. Almost everything else amounted to little more than shifting the deck chairs on the Titanic.

The comments reveal that the respondents generally favour increased solicitation of support groups, but oppose the establishment of a task force to deal with financial constraint. Most of the comments relevant to item 43 clearly indicated that faculty members believed little could be accomplished by lobbying the government for more funding. The comments revealed the belief that the particular political party in power does make a difference and that funding will increase just prior to a provincial election. Much concern was also expressed about the perceived political patronage of the college boards of governors.

Factor 7: Revenue Enhancement

Item 80 (N=2): That the institution increase tuition fees. (For - 1, Against - 1, Other - 0)

For: Tuition fees could be substantially increased.

Against: From my personal background, I would argue that tuition fees are already high and are a deterrent to higher education.

Item 96 (N=3): That the institution require student housing to become self-supporting. (For - 2, Against - 0, Other - 1)

For: Student housing is self-supporting.

Item 95 (N=3): That the institution require food services to become self-supporting. (For - 3, Against - 0, Other - 0)

For: Food services, bookstore, etc. are all self-supporting.

The comments indicate that student housing and food services are already operated on a self-supporting basis at some colleges. There were few comments about increasing tuition fees. Under the topic of "revenue enhancement" several faculty members commented that they are now expected to increase the institution's revenues through short courses for business and industry.

Factor 8: Discontinuance of Programs

Item 69 (N=14): That the institution discontinue academic programs of low priority. (For - 1, Against - 2, Other - 11)

For: If the programs do not provide the students with job opportunities following the course, they should be scrapped.

Against: These may change to higher priority in the future and they will be very hard to start up again.

The comments suggested that the acceptability of discontinuing programs was somewhat controversial and very situational.

Factor 9: Deficit Financing

Item 83 (N=2): That the institution incur an operating deficit. (For - 2, Against - 0, Other - 0)

For: Send the bill to the government. Education in the Charter of Rights is a right for all equally.

Item 47 (N=1): That the institution take significant financial risks when dealing with financial constraint. (For - 1, Against - 0, Other - 0)

For: This is part of operating a business -- this institution is viewed as a business by its management.

Item 44 (N=7): That the institution threaten to reduce its academic programs unless adequate funding is forthcoming. (For - 0, Against - 5, Other - 2)

Against: Consider it more acceptable to reduce administrative overhead than to threaten to reduce academic offerings.

The few remarks indicate that faculty members do not support making threats to reduce academic programs.

Factor 10: Conservation Measures

Item 85 (N=8): That the institution utilize utility conservation measures (e.g., use of telephones). (For - 6, Against - 0, Other - 2)

For: Telephone, photocopying, supplies, etc. should be curtailed as much as possible without endangering efficient delivery of course material.

Item 84 (N=11): That the institution utilize energy conservation measures (e.g., use of electricity). (For - 8, Against - 0, Other - 3)

For: Energy conservation is a primary consideration that is given only lip service. Canada is the highest energy user in the world. There are energy conservationists in America presently saving outstanding sums of money with a payback period of 14 months. Please consider this area very carefully.

The comments revealed that faculty members support conservation measures, and that such measures have already been implemented.

Factor 11: Incentives for Reducing Faculty

Item 49 (N=2): That the institution provide incentives for the early retirement of faculty members. (For - 1, Against - 0, Other - 1)

For: Only if this is at the request of the employee -- not the employer.

Item 51 (N=2): That the institution make it easier for faculty members to obtain voluntary leave without pay. (For - 0, Against - 2, Other - 0)

Against: Can cause problems when on-leave faculty return to campus.

Item 50 (N=3): That the institution provide incentives for changing the full-time employment of permanent faculty members to part-time employment. (For - 3, Against - 0, Other - 0)

For: Encourage faculty to become part-time with similar benefits as full-time. I support the concept of job-sharing.

The remarks suggested that respondents generally support incentives for reducing faculty positions, as long as such incentives are voluntary for faculty members.

Summary

This chapter has reported a content analysis of open-ended comments in 743 of the returned questionnaires. These comments have provided descriptive data to supplement the statistical findings of Chapter 4. In the respondent's own words, these comments illustrated the range and intensity of faculty members' opinions regarding the perceived impact of financial constraint and the acceptability of various measures of dealing with financial constraint.

The content analysis is not representative of the entire sample because only 51.7 percent of the respondents provided open-ended comments and some respondents provided many elaborate comments while others provided only a few simple comments. However, the comments, collectively, furnish insights into the reactions, responses and concerns of faculty members during a period of financial constraint.

Generally, the written comments supported the statistical findings. Sometimes there was a discrepancy between the written comments and the statistical findings. This can be explained because the written comments were few in numbers for some items and not necessarily representative of the sample.

With regard to the perceived impact of financial constraint, the comments support the following generalizations: (1) Faculty members considered that financial constraint was a serious problem. Some respondents, particularly those from British Columbia colleges that were expanding into degree-granting institutions, believed that financial constraint had eased. (2) Faculty expected financial constraint to continue into the foreseeable future. Again, some of the respondents from the British Columbia institutions perceived that financial constraint had eased two years ago. Many faculty expect financial constraint to ease with a change in the provincial government and just prior to a provincial election. (3) Faculty considered that financial constraint has had a negative impact on the quality of instruction. The adverse effect was associated with increased faculty workloads, a lack of equipment, a lack of instructional supplies, less qualified faculty and attempts to operate the college as a business. (4) Faculty believed that financial constraint had a detrimental effect on their morale. (5) Some faculty perceived that financial constraint was adversely affecting their socio-economic status, whereas others perceived no adverse effects. (6) Some faculty perceived their career aspirations were being adversely affected by financial constraint, so they were seeking other employment. (7) Many faculty considered that the overall effect of financial constraint on the efficient use of resources was harmful, but a few thought it was beneficial. (8) Faculty perceived that financial constraint was detrimental to the overall effectiveness of academic staff. (9) Faculty considered that financial constraint was detrimental to establishing the correct priorities, especially within the institution. (10) Different views were expressed regarding the effect of financial constraint on the voluntary service activities of faculty. Some faculty reported more committee work and fund-raising activities due to financial constraint, whereas others reported less voluntary service activities because of increased teaching workloads. (11) Some faculty, especially part-time faculty, considered that financial constraint had the effect of increasing their outside employment, whereas some full-time faculty reported that financial constraint had decreased their outside employment due to their increased teaching workloads.

With regard to the acceptability of the 11 types of measures for dealing with financial constraint, the comments suggested the following: (1) Faculty considered that neither a freeze in salary nor an increase in faculty teaching workloads was acceptable. (2) Some faculty perceived program development as an opportunity to expand programming, while others were concerned that program development would adversely affect the operation of existing programs. (3) Faculty consider that there has been a deterioration in instructional quality because of a shortage of funds for equipment, supplies, repairs and library materials. (4) Faculty members do not approve of the further reduction of secretarial support but they are most agreeable to reducing the number of administrators. (5) Faculty are cautiously supportive of faculty positions being deemed redundant, subject to the redundancy procedures being acceptable to them. (6) Faculty were generally in favour of increased solicitation of support groups, but were pessimistic that such efforts would attract additional financial support. Some faculty perceived that a change in the provincial political party would be beneficial and that funding would increase just prior to a provincial election. (7) Student housing and food services are already operated on a self-supported basis at some colleges. (8) The discontinuance of programs is likely to be a controversial, and very situational, measure of dealing with financial constraint. (9) Faculty members do not support the concept of threatening to reduce academic programs as a means of responding to financial constraint. (10) Faculty support conservation measures and such measures have already been implemented. (11) Incentives for reducing faculty positions are generally acceptable, provided such incentives are voluntary for faculty members.

In summary, the written comments portrayed the intensity of feelings associated with issues surrounding financial constraint. Faculty members left little doubt that financial constraint was a matter of intense concern for them. The comments gave evidence of the controversial and political nature of financial constraint, and the measures which may be used to deal with it. There existed a range of opinions, many opposed to each other, on most of the items dealing with financial constraint. Therefore, solutions to financial constraint must be capable of resolving conflicting opinions and interests.

CHAPTER 6
SUMMARY, CONCLUSIONS AND IMPLICATIONS

This final chapter presents (1) a summary of the study -- its purpose, design and methodology, (2) a summary of the findings, (3) conclusions drawn from the findings, (4) a discussion of the findings, (5) implications for research and administration, and (6) a concluding comment.

SUMMARY OF THE STUDY

This section reviews the study's purpose and methodology.

Purpose of the Study

The purpose of this study was to identify the preferences and perceptions of faculty members with regard to financial constraint at their respective public colleges and technical institutes in Alberta, British Columbia, Manitoba and Saskatchewan.

This general purpose gave rise to seven technical questions:

1. What are faculty members' perceptions of the impact of financial constraint at their respective institutions?
2. Does the perceived impact of financial constraint vary with selected personal and institutional factors?
3. What measures for dealing with financial constraint do faculty members consider acceptable?

4. Does the acceptability of measures for dealing with financial constraint vary with selected personal and institutional factors?

5. Is there a relationship between the perceived impact of financial constraint and the acceptability of measures for dealing with financial constraint?

6. To what extent has financial constraint actually occurred in the colleges and technical institutes between 1984 and 1989?

7. Is there a relationship between the perceived impact of financial constraint and the relative financial constraint experienced?

Design and Methodology

The study's design was characterized as survey research. Data were collected by means of a specially designed four-part questionnaire, which was pilot-tested and administered in October, 1989, to a one-third stratified sample, drawn from a population of approximately 8,000 full-time faculty members at 43 public colleges and technical institutes in Alberta, British Columbia, Manitoba and Saskatchewan. There were 1,436 usable questionnaires returned for an overall return rate of 53.7 percent. This sample was representative of the population with regard to distribution by province and by college or institute sector. The data were analyzed quantitatively by several statistical procedures including the calculation of means, standard deviations, t-tests, one-way analysis of variance, factor analysis and Pearson correlation coefficients. Open-ended comments from 743 respondents were subjected to content analysis.

SUMMARY OF THE FINDINGS

In this section, the findings of the statistical analysis are summarized under the headings of (1) the perceived impact of financial constraint, (2) the acceptability in principle of measures for dealing with financial constraint, (3) the relationship between the perceived impact of financial constraint and the acceptability in principle of measures for dealing with financial constraint, (4) the relationship between the perceived impact of financial constraint and the relative financial constraint, determined on a provincial basis, and (5) a content-analysis of the open-ended comments.

Perceived Impact of Financial Constraint

Faculty perceived financial constraint as a significant problem at their respective institutions, a problem that would probably last for at least another three years. Faculty did not agree that the government would probably increase the funding of their institution next year by more than the rate of inflation. Faculty considered that the impact of financial constraint was deleterious on the quality of instruction, their morale, their socio-economic status, the achievement of their career aspirations, the efficient use of resources, the overall effectiveness of academic staff, and the consideration of priorities. Faculty also perceived that the impact of financial constraint on themselves individually was negative in terms of their individual quality of instruction, their individual morale, their individual socio-economic status and the achievement of their individual career aspirations. In addition, faculty perceived that the impact of financial constraint was to decrease their voluntary service activities and increase their outside employment. Overall, faculty viewed the impact of financial constraint at their institutions as negative.

The perceived impact of financial constraint was found to vary little by administrative position and by institutional accumulated operating budget surplus. The perceived impact of financial constraint varied somewhat by highest academic qualification, by tenure status, by status of appointment, by nature of appointment, by college sector or technical institute sector, by size of institution, by years employed at the institution, by age, by sex, by support of institutional mission and by the President's support of institutional mission. The perceived impact of financial constraint varied considerably by program area, by province, by full-time faculty positions lost by the institution and by the department in the last five years, by fair financial treatment of the institution and of the department in the last five years and by confidence in the President to effectively manage financial constraint. Generally, the impact of financial constraint was considered to be more negative by faculty in university transfer programs, by faculty in British Columbia and Saskatchewan, by faculty who were in institutions or departments that had lost full-time faculty positions in the last five years, by faculty who believed their institutions or departments had not been fairly treated, financially, in the past five years and by faculty who did not have confidence in the Presidents of their institutions to effectively manage financial constraint. Finally, the perceived impact of financial constraint was consistently perceived to have a more extreme impact on faculty in general than on individual respondents.

Acceptability in Principle of Measures for Dealing With Financial Constraint

Faculty members provided definite preferences regarding institutional responses to financial constraint. The primary concerns of faculty emerge if the least acceptable preferences for dealing with financial constraint are examined in Table 4.23.

Faculty members reject most strongly measures that would reduce their compensation, freeze their compensation, increase their average teaching workload or limit future faculty appointments. Faculty also strongly reject measures that would hinder their ability to provide quality instruction such as a reduction in funds for instructional supplies, library materials, repairs, renovations and equipment. Faculty members' primary concerns in regard to financial constraint related closely to their professional work activities.

When possible institutional responses to financial constraint are further removed from faculty members' professional work activities, faculty's opposition is reduced. Faculty members tend to reject less strongly reductions in administrative support, such measures as reductions in student counselling services, secretarial support, academic computing services, and non-academic staff. Similarly, faculty opposition is reduced to measures such as incurring an operating deficit and taking significant financial risks.

Faculty members tend to consider acceptable those measures that have a less direct and negative impact on their professional work activities. Faculty members tend to accept possible institutional responses that include raising tuition fees, closing departments of low priority, discontinuing programs of low priority, terminating faculty deemed redundant, requiring student housing and food services to be self-supporting and using program evaluations to determine the priority of programs. Faculty consider acceptable voluntary leave without pay for faculty, incentives for early retirement of faculty, merging related departments, the establishment of a task force and procedures to deal with financial constraint, a review of the institution's mission, publicity campaigns, private fund-raising and utility conservation measures. Finally, faculty are most accepting of measures to lobby the government and other constituencies on behalf of the institution, of the development and expansion of programs, of establishing clear guidelines for discontinuing programs and terminating redundant faculty members, of energy conservation measures, of cooperative programming with business, industry and other colleges, of faculty involvement in the formation of responses to deal with financial constraint and of a reduction in the number of administrators.

Of the 65 measures for dealing with financial constraint that were included in the questionnaire, 38 were identified as acceptable or tending to be acceptable in principle, whereas 27 measures were identified as unacceptable or tending to be unacceptable in principle.

Of the 38 measures identified as acceptable or tending to be acceptable in principle, 26 were substantive measures and 12 were process measures. Of the 26 substantive measures, four were related to lobbying for additional funds and the promotion of the institution's activities. Ten of the substantive measures were related to the expansion or reduction of programming, three were voluntary alternatives to dismissal, one was related to a reduction in staff, two were related to students, four were associated with ancillary services and two were conservation measures.

Of the 27 measures identified as unacceptable or tending to be unacceptable in principle, 25 were substantive measures and two were process measures. Nine of the substantive measures were related to the dismissal of personnel, the filling of vacant faculty positions or voluntary alternatives to dismissal. Four of the substantive measures were related to reductions in services provided to faculty, three were related to services available to students, six were related to the general financial management of the institution and a reduction in expenditure for new equipment and facilities, two were related to faculty members' salaries and one was related to a change in faculty working conditions.

In order to reduce the data, a factor analysis was conducted of the 65 measures for dealing with financial constraint that were contained in the questionnaire. Eleven factors were identified. Faculty members considered as acceptable "conservation measures," "program development" and "soliciting support groups." Faculty members also tended to consider as acceptable "abolishment of positions and programs." Faculty members tended to consider as neutral or uncertain "discontinuance of programs," "revenue enhancement," "incentives for reducing faculty," "budget reductions for support services" and "deficit financing." Faculty members tended to consider as unacceptable "facilities and equipment/faculty support." Faculty members also considered as unacceptable "salaries and positions."

The identification of group differences with regard to the acceptability in principle of measures for dealing with financial constraint was based on the factor analysis of the 65 measures for dealing with financial constraint. The acceptability in principle of measures for dealing with financial constraint was significantly related statistically to highest academic qualification, administrative position, college sector or technical institute sector, age, sex, fair financial treatment of the institution and the department in the last five years, and the President's support of the institutional mission. However, most variation was found by program area and province.

Relationship Between the Perceived Impact of Financial Constraint and the Acceptability in Principle of Measures for Dealing With Financial Constraint

A weak relationship was identified between the 19 variables measuring the perceived impact of financial constraint and the 11 factors measuring the acceptability in principle of measures for dealing with financial constraint. Three of the 11 factors revealed a persistent pattern of correlations, although the correlation coefficients were low. The perceived impact of financial constraint was related to the acceptability of "salaries and positions," "soliciting support groups" and "deficit financing." Overall, the perceived impact of financial constraint was only weakly related to the acceptability in principle of measures for dealing with financial constraint.

Relationship Between the Perceived Impact of Financial Constraint and the Relative Financial Constraint Experienced Within a Province

In terms of the relative financial constraint on a provincial basis, between the years 1984-85 and 1988-89, Alberta experienced the greatest financial constraint, followed by Manitoba and British Columbia. Saskatchewan experienced a large increase in real operating dollars spent per student because of a large decrease in the number of students over this five-year period. Faculty from British Columbia, followed by faculty from Saskatchewan, were the most negative about the perceived impact of financial constraint, although these provinces experienced less relative financial constraint than did Alberta and Manitoba. There appears to be no relationship between the perceived impact of financial constraint of faculty and the relative financial constraint experienced within a province.

Content Analysis of the Open-Ended Comments

The results of the content analysis provided descriptive data to supplement the foregoing statistical findings. These comments revealed a high intensity of feelings regarding the perceived impact of financial constraint and the acceptability of various measures of dealing with financial constraint. Generally, the written comments supported the statistical findings.

CONCLUSIONS

The following generalizations summarize the conclusions reached in this research project for the seven research questions.

1. Faculty members perceived the impact of financial constraint at their institutions as a serious problem, a problem that would last for at least another three years.

2. The perceived impact of financial constraint does vary with selected personal and institutional factors.

3. Faculty members' acceptance in principle of measures to deal with financial constraint at their institutions increases as the impact of those measures becomes further removed from their professional employment activities.

4. The acceptability of measures for dealing with financial constraint does vary with selected personal and institutional factors.

5. Only a very weak positive relationship exists between the perceived impact of financial constraint and the acceptability of measures for dealing with financial constraint.

6. In Alberta, British Columbia and Manitoba the total operating expenditures per student, in real dollars, decreased between 1984-85 and 1988-89. In Saskatchewan, the total operating expenditures per student, in real dollars, increased because of a large decrease in student enrollments.

7. On a provincial basis, there is no direct correlation between the perceived impact of financial constraint and the relative financial constraint experienced.

DISCUSSION OF FINDINGS

In this section, the findings of the study are discussed under the headings of (1) sectoral variations, (2) provincial variations, (3) financial constraint processes, (4) the myth and the reality of financial constraint, and (5) two solitudes -- faculty and administrators.

Sectoral Variations

The results of this research are very similar to Ell's (1988) findings with respect to faculty members' perceptions of the impact of financial constraint at universities in Western Canada. Although the data for this study were collected almost four years after Ell collected his data in early 1986, the measures that were acceptable or unacceptable, in principle, for dealing with financial constraint are very similar in the two studies.

The most significant difference between the two studies is that faculty members at public colleges and technical institutes perceive more variation of the impact of financial constraint and a greater variation in the acceptability of institutional responses for dealing with financial constraint than did university faculty in the Ell (1988) study. The greater variation observed for faculty at public colleges and technical institutes can be attributed to the fact that these faculty are more heterogeneous than their university counterparts. University faculty experience a more uniform institutional culture, more uniform procedures and regulations, a more uniform governance system and generally have more similar educational experiences than have faculty at public colleges and technical institutes. For example, almost all university faculty are themselves graduates of a university, the majority with a Ph.D. education, and have lived in large urban centres and become accustomed to all the amenities of large service centres. By contrast, public colleges and technical institutes employ faculty with a variety of credentials ranging from a journeyman certificate to a Ph.D. Unlike most university faculty, many college and technical institute faculty members have many years of industrial experience before embarking on a teaching career in apprenticeship or diploma programs. Many public colleges are small in size and are located in smaller, rural communities which possess minimal instructional support in terms of equipment, facilities and collegial support. These widely diverse backgrounds and experiences of college and institute faculty members help to account for the greater variation found in this study than Ell (1988) found in his study with university faculty.

The mandates of public colleges and technical institutes are also more diverse than are the mandates of universities, which also helps to account for the greater variation of the perceived impact of financial constraint and in the acceptability of institutional responses for dealing with financial constraint than found for university faculty. The primary tenets of university mandates are to grant degrees and to conduct research. Public colleges and technical institutes are "community" institutions and respond to a greater variety of local community needs than most universities. This diversity of purpose attracts faculty that are more diverse in philosophy, experience and expectations than are university faculty. Some of the distinguishing characteristics of public colleges, namely student heterogeneity, geographic decentralization, a strong community orientation and their public character (Dennison and Gallagher, 1986, pp. 69-80) account for the greater variation found in this study with college faculty than Ell (1988) found with university faculty.

Provincial Variations

This section will discuss the provincial variations at the time the survey was conducted in terms of the fiscal climate, student enrollments, institutional characteristics and the political climate.

During the five-year period 1984-85 to 1988-89, all provinces experienced a growth in real expenditures in their public colleges and technical institutes. Manitoba and Saskatchewan experienced more growth in real operating expenditures, on a percentage basis, than did Alberta and British Columbia. The particular five-year period that is used to measure the relative financial constraint will cause variations in the results between provinces. For example, institutions in British Columbia experienced three consecutive years of severe financial constraint beginning in 1983-84. In 1988-89, three of these public colleges in British Columbia received additional funding to accommodate their recently acquired degree-granting status. Hence, the relative financial constraint at the British Columbia institutions, collectively, may have been more severe if the five-year period 1983-84 to 1987-88 had been used in this study. Also, any particular five-year period that is chosen may include a particularly "good" or "bad" year in one or more provinces, in terms of total institutional expenditures. These total expenditures are usually controlled by the amount of provincial government grants for any particular fiscal year. The five-year period seems to be justified in that people tend to forget the effects of government policies very quickly. To illustrate this, several British Columbia faculty members who experienced severe financial constraint from 1983 to 1986 commented in the fall of 1989 that financial constraint appeared to be over because additional funds were given to their institutions in 1988-89 to fund their recently approved degree-granting status.

In Saskatchewan, the faculty perceived severe financial constraint, even though the Saskatchewan institutions experienced a greater increase in real operating expenditures than did the institutions in the other provinces, over this five-year period. One explanation as to why Saskatchewan faculty perceived that their institutions had less funding is that these faculty had no collective agreement settlement or salary adjustments, some up to the past three years, at the time this survey was completed. The fiscal climate in both Alberta and Manitoba had been relatively stable during the period 1984-85 to 1988-89, except that Alberta institutions experienced a one year reduction of three percent in their nominal grants in 1987-88. Many Alberta faculty seemed uncertain about future funding as a result of their 1987-88 experiences.

During the period of this study great variation occurred in student enrollments in the four provinces. Alberta experienced the greatest increase -- an increase of 39% in full-time-equivalent credit course enrollments. It seems that Alberta possessed the capacity within the system to increase class sizes to instruct many more students with only a small increase in real operating expenditures. Alberta has the largest capacity of the four provinces for apprenticeship training. In the late 1970s, Alberta trained almost 30% of Canada's apprentices. In the 1980s, apprenticeship training greatly decreased in Alberta. Much of the excess apprenticeship training capacity was diverted to other educational programs.

By contrast, Saskatchewan institutions experienced a decrease in their total enrollments of 29.5% between 1984-85 and 1988-89. In this five-year period the Saskatchewan technical institutes recorded an overall decrease of 13% in their full-time enrollments. The total part-time enrollments of the colleges and technical institutes in Saskatchewan decreased by more than 30%. The large decrease in the part-time enrollments can best be attributed to a policy change in 1987-88, in which Saskatchewan Education required 100% cost recovery for non-credit programs. Prior to 1987-88, non-credit programming was subsidized by the provincial government. Saskatchewan Education reports student enrollments in terms of the total number of students, but not in terms of full-time-equivalent students in their credit programs. Therefore, the large decrease in part-time enrollments, presumably in non-credit programs, resulted in a large percentage increase in funds spent per student in Saskatchewan between 1984-85 and 1988-89.

Student enrollments increased in both British Columbia and Manitoba during the period of this study by about 10% and 20%, respectively. Since the institutions in British Columbia experienced severe financial constraint in 1983-84, much of the system's capacity to accommodate more students had been utilized prior to the five-year period of this study. It would appear that, except for a few program areas, the educational institutions in all provinces, except Saskatchewan, were near capacity in 1988-89, and further expansion of student numbers would require additional funding. Blumenstyk (1990) and Kaplan (1991) both project that many students will be turned away from degree-granting institutions due to financial constraint at these institutions. Hauptman (1991), Hopkins (1990), and Simpson (1991) predict that tuition fees will rise substantially, especially at universities. These rising educational costs will reduce the options of many students to choose among institutions (Andrew and Russo, 1989). This will encourage more students to turn to the lower cost alternative of local public colleges and technical institutes.

There is significant variation in terms of the characteristics of the colleges and technical institutes within the four provinces -- particularly in terms of institutional governance and programming mandates. In Alberta and British Columbia, institutions have much more local autonomy than in Manitoba or Saskatchewan. In both Alberta and British Columbia, faculty employment contracts are negotiated on an institutional basis, whereas Manitoba and Saskatchewan have provincially negotiated contracts. In Manitoba, faculty members are provincial employees.

In Manitoba, the three community colleges have a closer resemblance to the technical institutes than they do to the public colleges in the other provinces. Manitoba's public colleges have a large percentage of adult basic education and technical training programs.

In Saskatchewan, more than 80% of the Saskatchewan respondents were employed by the Saskatchewan Institute of Applied Science and Technology (SIAST). SIAST had commenced operations about a year prior to this survey by combining the technical institutes and the community colleges in Moose Jaw, Regina, Saskatoon and Prince Albert into one institution, under one administration. In the written comments accompanying the questionnaires, many Saskatchewan respondents expressed great dissatisfaction with the new organizational structure, the two head offices and with SIAST's administration.

In Saskatchewan, the regional colleges have a very restrictive programming mandate, which limits their programming to primary human development programs such as adult basic education, English as a

Second Language, life skills, etc. In addition, the Saskatchewan regional colleges may broker certificate, diploma and university courses from other institutions. These colleges also conduct extensive non-credit community programming. By contrast, the majority of the public colleges in Alberta and British Columbia are comprehensive institutions offering their own programs in adult basic education, technical training and university transfer courses. Three of the colleges in British Columbia have degree-granting mandates.

The political climate, at the time of this survey, was similar in all four provinces. There were Progressive Conservative governments provincially in Alberta, Manitoba and Saskatchewan and a Social Credit government in British Columbia. The federal government was Progressive Conservative. During the time of this study, the federal government was attempting to limit the transfer payments to the provinces for post-secondary education. All provincial governments were also trying to restrict provincial funding to post-secondary education, to increase tuition fees and other institutional revenues and to rationalize programming in their higher education systems. There was the desire by provincial governments to operate the institutions more like a business than had occurred in the past.

Financial Constraint Processes

An important finding of this study is that processes are most important during periods of institutional financial constraint. In this study, 12 of the 14 process measures for dealing with financial constraint were acceptable to faculty members. This finding strongly supports Dimond's (1991, p. 74) findings that faculty members want to be involved on budget committees and that the processes of consultation are equally as important as the actual budgetary outcomes. The specific procedures and measures used to deal with financial constraint at each institution will seemingly emerge if the processes are effective.

The two process measures that faculty found unacceptable were employment terminations based on seniority and across-the-board cuts to reduce expenditures. Neither of these processes approach financial constraint on the basis of merit or future institutional need. Hardy (1990, p. 149) said that when reducing positions some selection criteria, such as seniority, required skills or performance, need to be used to reassure employees that the process is handled fairly. Public college and institute faculty rejected the process of selection by seniority, but they accepted both institutional needs and faculty performance as valid criteria for selecting redundant positions. This finding supports the findings of Ashar and Shapiro (1990, p. 137) that financial constraint at an institution maximizes the reliance on rational procedures.

The Myth and The Reality of Financial Constraint

It is a myth that increased relative financial constraint conditions faculty members' perceptions of financial constraint. The results of this study reveal that faculty are most concerned with those measures that personally affect them and have much less concern for the formal financial constraint which threatens the security of the system. This may explain why Schaw's (1989) warnings about the deterioration of higher education facilities create little interest among faculty members. Perceptions of constraint are often based on lower cost areas that personally affect individual faculty, such as photocopying, instructional supplies, telephone usage and faculty travel. Generally, faculty members believe that financial constraint is more seriously affecting others than themselves.

The term "relative financial constraint" measures the formal financial constraint of the provincial system. The total operating expenditures per student on a provincial basis will often have little relevancy to individual faculty members. In public colleges and technical institutes 75 to 80 percent of the total operating expenditures is used to pay salaries and employee benefits. The remaining 20 to 25 percent is used to pay for instructional supplies, utility costs, maintenance costs, travel, telephone charges, etc. The nature of most faculty collective agreements is such that individual faculty members have little influence on the amount of their salaries or employee benefits. Individual faculty members are more likely to feel financial constraint when their personal lives are negatively affected by a shortage of funds for instructional supplies, professional development, parking, telephones and travel. Many faculty also expressed a concern about obsolete instructional equipment, which is purchased through capital budgets. The term "relative financial constraint" considered only operating expenditures, not capital expenditures. It would appear that the term "relative financial constraint" on a provincial basis does not adequately reflect the sensitivity of funding variations on those items that are most important to individual faculty members.

The reality of financial constraint is associated with faculty's perceptions of the leadership of the institution during a period of financial constraint. This study clearly shows that faculty members' confidence in their President to effectively manage financial constraint has a direct effect on their perceptions of the severity of financial constraint and on their acceptability of the measures to deal with financial constraint. Dimond (1990, p. 75) found during institutional budgeting processes that who was in charge and the nature of that person's leadership style clearly mattered to faculty members. Leadership credibility depends not only on what a person has achieved but also on how the person has gone about achieving it. Kerr (1991, p. 247) asserts that the solutions to the grave problems facing higher education depend more on the quality of the institutional presidents than any one other factor.

Two Solitudes -- Faculty and Administrators

Faculty egocentricity is very apparent in this study. Faculty members are more willing to accept financial constraint measures which threaten other programs, colleagues and students than their own. Institutional administrators are viewed by faculty members as most dispensable. Faculty are very much in favour of reducing the number of administrators as a means of reducing institutional expenditures. The open-ended comments of many of the respondents indicate that their institution has too many administrators, that these administrators are not trusted and that many administrators are a hindrance to the instructional processes at colleges and technical institutes. Hansen and Guidugli (1990, p. 157) found that between 1975 and 1983, the number of full-time administrative positions in higher education showed little or no increase relative to the number of full-time faculty positions, but that the number of professional non-faculty positions increased rapidly. The net result was that the proportion of faculty members as a percentage of all full-time employment in higher education fell by about ten percent, whereas professional non-faculty employment increased by 12 to 16 percent of the total full-time employment. Van de Pitte (1991, p. 148) claims that academic administrators are generally not trusted because administrators are obliged to make politically wise decisions, which cost administrators their moral innocence. Hence, they run a perpetual risk of moral compromise. Faculty view political decisions as patronage payments, not open, rational and logical decisions. Administrators are thus seen as being too closely allied with political leaders. As noted in the comments from respondents employed by Saskatchewan institutions, some of the faculty-administration confrontation that exists in institutions is initiated and fueled by the negotiating process when the faculty collective agreement is revised. This confrontational, often antagonistic, negotiating process usually occurs annually, often lasts for several months and may establish the climate of the institution for years.

Overall, faculty members tend to have a micro perspective of financial constraint. Their knowledge and interest is primarily focused on their own institution, and particularly in their own program area. They prefer to view students as apprentices and administrators as servants. Faculty clearly watch the details of the processes and the measures used to respond to financial constraint, particularly as it affects them personally. During a period of financial constraint, the interest of faculty is to improve the efficiency of current operations. Their focus is very much centred on efficiency measures. By contrast, senior institutional administrators have more of a macro perspective of financial constraint, viewing its impact on their institution as a whole, and upon the entire higher education system for years to come. To administrators, students are clients to be served. The image portrayed by the institution and its accountability to the community are important to administrators. During a period of financial constraint, administrators are more willing than faculty to look at effectiveness measures for responding to financial constraint, such measures as changing institutional delivery methods and abolishing programs and services.

IMPLICATIONS FOR RESEARCH AND ADMINISTRATION

This section deals with the implications of this study for further research into the topic of financial constraint in public colleges and technical institutes and provides some recommendations for the administration of these institutions.

Implications For Further Research

To complement this study's findings, several additional research studies could be undertaken.

1. It is recommended that similar research be undertaken in five to ten years, if financial constraint continues, to determine whether the acceptability in principle of measures for dealing with financial constraint changes over time.

2. It is recommended that similar research be conducted in about ten years time to determine the effect the current period of financial constraint had on colleges and technical institutes. Because the last few years have been the only prolonged period of financial constraint for public colleges and technical institutes in Western Canada, the long-term effects of this period of financial constraint should be studied. Such research would also determine whether the perceived impact of financial constraint by faculty members in public colleges and technical institutes varies over time.

3. In further research the sample of respondents could be expanded to include those faculty with conditional or part-time appointments. Although this study was directed at full-time faculty members, four percent of the respondents reported part-time appointments. This study showed that part-time faculty members were less negative towards the perceived impact of financial constraint. The perceptions of part-time faculty members, and the measures acceptable to them for dealing with financial constraint, merit further study.

4. In further research it is proposed that additional demographic characteristics and variables be investigated in terms of the perceived impact of financial constraint and the acceptability of

measures for dealing with financial constraint in order to broaden the understanding of this topic.

5. It is recommended that further research be undertaken to measure the relative financial constraint of both operating and capital funding of individual institutions. Then, it is proposed that an in-depth study be conducted on the institution with the least and greatest relative financial constraint to determine how low or high relative financial constraint affects the lives of faculty members.

6. Additional research may study the perceived impact of financial constraint from the perspective of other institutional groups, such as students, support staff, administrators and the boards of governors.

Implications for Institutional Administration

A knowledge of the perceptions and preferences of faculty members provides useful information to assist administrators at public colleges and technical institutes. The findings of this study permit several recommendations for administering these institutions.

1. Administrators should regularly monitor faculty members' perceptions of financial constraint at their institution because it has a negative effect on several aspects of faculty's professional work

activities. Faculty perceive financial constraint as a significant problem, a problem that will exist in the foreseeable future and a problem that will have negative effects on faculty members, including the quality of instruction, morale, socio-economic status and career aspirations. When monitoring institutional financial constraint, administration should remember that faculty members tend to somewhat exaggerate their perceptions of the impact of financial constraint upon themselves as a group, compared with their perceptions of the impact of financial constraint upon themselves individually.

2. Each institution should develop its own responses to financial constraint because there is variation among different faculty as to their perceptions of financial constraint. Institutional budget committees should be representative of all faculty members because there is some variation in the perceived impact of financial constraint among the faculty members with regard to highest academic qualification, tenure status, status of appointment, nature of appointment, college or technical institute sector, size of institution, years employed at institution, age, sex, support of institutional mission and the President's support of the institutional mission. Considerable variation of faculty's perception of the severity of financial constraint should be

expected between program areas and between provinces. It is especially important that all program areas be represented because considerable variation of faculty's perception of the severity of financial constraint occurs between program areas.

3. In implementing institutional responses to financial constraint, administration should be knowledgeable of which measures are acceptable and which are non-acceptable in principle to faculty members. When institutional administrators believe it is necessary to implement some measures that are non-acceptable to faculty, they should also make a concerted effort to implement many of the acceptable measures. Great care should be taken in implementing non-acceptable measures because the processes of consultation are equally as important as the actual budgetary outcomes. Each institution should develop a clearly delineated process and procedures for declaring positions redundant and for downsizing or terminating programs. When reducing institutional expenditures, faculty members prefer selective cuts to across-the-board reductions.

4. Administration should regularly inform the higher education officials of the provincial government of the institution's financial needs because faculty members believe the provincial government is responsible for the financial constraint experienced by public

colleges and technical institutes. Faculty believe the provincial government, and the public they represent, do not place a high enough priority on education at these institutions, and therefore do not adequately fund these institutions. Institutional lobbying efforts, such as visits by ministry officials, formal and informal meetings, and specific proposals for additional funding, should involve many faculty members.

Concluding Statement

This research considered the effects of financial constraint in public colleges and technical institutes in the provinces of Alberta, British Columbia, Manitoba and Saskatchewan from the perspective of faculty members. This study asked faculty members to indicate their perceptions of the impact of financial constraint at their respective institutions and to disclose the acceptability of various measures for dealing with financial constraint. Faculty members represent the professional core of these academic institutions; as such their support is vital to the well-being of colleges and technical institutes. Therefore, this study can be considered successful to the degree that it contributes to the understanding of financial constraint among faculty members, administrators, students and boards of governors at public colleges and technical institutes.

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APPENDIX A: SURVEY INSTRUMENT

SURVEY OF FACULTY PERCEPTIONS OF FINANCIAL CONSTRAINT AT PUBLIC COLLEGES AND TECHNICAL INSTITUTES

Please return to:

Steve Pawlak
Department of Educational Administration
7-104 Education Building North
University of Alberta
Edmonton, Alberta T6G 2G5

Your comments are welcome, and space is provided on pages 4, 5, 6 and 11 for this purpose.

PART I INFORMATION ABOUT THE INSTITUTION AND THE RESPONDENT

For each question, please circle one number beside the response that best describes your status at your college or technical institute.

Please do not write in this column

1. In what program area is the majority of your responsibility? $\overline{1}\,\overline{2}\,\overline{3}\,\overline{4}\,\frac{1}{5}$

   1. Adult Basic Education/Adult Upgrading
   2. Apprenticeship
   3. Career Programs 6
   4. University Transfer
   5. Other ______________________
      (If other, please indicate)

2. What is the highest academic qualification you hold?

   1. Doctorate
   2. Master's Degree
   3. Bachelor's Degree 7
   4. Diploma (two years or more)
   5. Other ______________________
      (If other, please indicate)

3. What is the status of your position?

   1. Tenured/Permanent appointment 8
   2. Non-tenured/Conditional appointment

4. If your employment status is non-tenured, is it a continuing or sessional appointment?

   1. Continuing 9
   2. Sessional

5. Is your appointment full-time or part-time?

   1. Full-time 10
   2. Part-time

6. Do you currently hold an administrative position?

   1. No 11
   2. Yes ______________________
      (If yes, please indicate title)

OVER

Please
do not
write in this
column

14. Has your department lost any full-time faculty positions in the last five years as a result of financial constraint?

    1. No
    2. Yes 19
    3. Don't know

15. Do you believe your institution has been fairly treated, financially, in the past five years?

    1. No 20
    2. Yes

16. Do you believe your department has been fairly treated, financially, in the past five years?

    1. No 21
    2. Yes

17. Do you believe your institution currently has a substantial accumulated surplus in its operating budget?

    1. No 22
    2. Yes

18. I support the mission of my institution.

    1. strongly disagree
    2. disagree
    3. neutral/uncertain 23
    4. agree
    5. strongly agree

19. The president of my institution supports the mission of my institution.

    1. strongly disagree
    2. disagree
    3. neutral/uncertain 24
    4. agree
    5. strongly agree

20. I have confidence in the president of my institution to effectively manage financial constraint.

    1. strongly disagree
    2. disagree 25
    3. neutral/uncertain
    4. agree
    5. strongly agree

OVER

1 = very negative
2 = negative
3 = neutral/uncertain
4 = positive
5 = very positive

							Please do not write in this column
27.	The impact of financial constraint at my institution on the socio-economic status of faculty is generally ____________	1	2	3	4	5	32
28.	The impact of financial constraint at my institution on the achievement of faculty career aspirations is generally ____________	1	2	3	4	5	33
29.	The impact of financial constraint at my institution on the efficient use of resources is generally ____________	1	2	3	4	5	34
30.	The impact of financial constraint at my institution on the overall effectiveness of academic staff is generally ____________	1	2	3	4	5	35
31.	The impact of financial constraint at my institution on the consideration of priorities is generally ____________	1	2	3	4	5	36

Comments: ____

____

C. In Section C, please indicate what you perceive to be the impact of financial constraint on you personally. Please circle one number to complete each statement. The scale is as follows:

1 = very negative
2 = negative
3 = neutral/uncertain
4 = positive
5 = very positive

32.	The impact of financial constraint at my institution on the quality of instruction that I am able to provide is ____________	1	2	3	4	5	37
33.	The impact of financial constraint at my institution on my morale is ____________	1	2	3	4	5	38
34.	The impact of financial constraint at my institution on my socio-economic status is ____________	1	2	3	4	5	39
35.	The impact of financial constraint at my institution on the achievement of my career aspirations is ____________	1	2	3	4	5	40

PART III MEANS OF DEALING WITH FINANCIAL CONSTRAINT

Please indicate whether you find the following means of dealing with financial constraint acceptable in principle. For each item, circle one number, indicating the extent to which you find the means acceptable in principle.

Please do not write in this column

The scale is as follows:

1 = very unacceptable
2 = unacceptable
3 = neutral/uncertain
4 = acceptable
5 = very acceptable

_ _ _ _ 2
1 2 3 4 5

40.	That the institution involve faculty members in the formation of measures to deal with financial constraint	1	2	3	4	5	6
41.	That the institution review its mission as a preliminary step to taking action to deal with financial constraint	1	2	3	4	5	7
42.	That the institution establish a task force to identify various measures to deal with financial constraint	1	2	3	4	5	8
43.	That the institution lobby government for more favorable funding arrangements	1	2	3	4	5	9
44.	That the institution threaten to reduce its academic programs unless adequate funding is forthcoming	1	2	3	4	5	10
45.	That the institution actively encourage support groups (e.g., community organizations, alumni) to lobby various constituencies on behalf of the college or technical institute	1	2	3	4	5	11
46.	That the institution utilize publicity campaigns in order to enhance the legitimacy of its activities	1	2	3	4	5	12
47.	That the institution take significant financial risks when dealing with financial constraint	1	2	3	4	5	13
48.	That the institution align its programs more closely with Canada's employment needs	1	2	3	4	5	14
49.	That the institution provide incentives for the early retirement of faculty members	1	2	3	4	5	15
50.	That the institution provide incentives for changing the full-time employment of permanent faculty members to part-time employment	1	2	3	4	5	16
51.	That the institution make it easier for faculty members to obtain voluntary leave without pay	1	2	3	4	5	17

OVER

1 = very unacceptable
2 = unacceptable
3 = neutral/uncertain
4 = acceptable
5 = very acceptable

							Please do not write in this column
66.	That the institution base employment terminations of faculty members deemed redundant on faculty performance evaluations	1	2	3	4	5	32
67.	That the institution establish clear guidelines for discontinuing programs	1	2	3	4	5	33
68.	That the institution utilize program evaluations as a means of determining the priority of programs	1	2	3	4	5	34
69.	That the institution discontinue academic programs of low priority	1	2	3	4	5	35
70.	That the institution close departments of low priority	1	2	3	4	5	36
71.	That the institution merge related departments	1	2	3	4	5	37
72.	That the institution develop new programs in high-demand areas	1	2	3	4	5	38
73.	That the institution expand current programs in high-demand areas	1	2	3	4	5	39
74.	That the institution enhance its reputation by developing programs of greatest academic potential	1	2	3	4	5	40
75.	That the institution undertake more programs in cooperation with business and industry	1	2	3	4	5	41
76.	That the institution enter into arrangements with other colleges or technical institutes in the delivery of programs	1	2	3	4	5	42
77.	That the institution strive to recruit students in programs in which its enrollment is below capacity	1	2	3	4	5	43
78.	That the institution raise admission standards	1	2	3	4	5	44
79.	That the institution increase its efforts at fund raising from private benefactors	1	2	3	4	5	45
80.	That the institution increase tuition fees	1	2	3	4	5	46
81.	That the institution increase charges for student computing services	1	2	3	4	5	47
82.	That the institution sell some of its assets	1	2	3	4	5	48
83.	That the institution incur an operating deficit	1	2	3	4	5	49

OVER

1 = very unacceptable
2 = unacceptable
3 = neutral/uncertain
4 = acceptable
5 = very acceptable

							Please do not write in this column
100.	That the institution reduce budget allocations for faculty members' academic computing services	1	2	3	4	5	66
101.	That the institution reduce budget allocations for faculty members' travel	1	2	3	4	5	67
102.	That the institution defer the improvement of grounds	1	2	3	4	5	68
103.	That the institution defer repairs and renovations to facilities	1	2	3	4	5	69
104.	That the institution defer the purchase of new equipment	1	2	3	4	5	70

PART IV COMMENTS

Please indicate in the space provided (and on the back of this page) any comments you may wish to make concerning financial constraint at your college or technical institute.

Thank you for your participation in this study.

APPENDIX B: LETTER OF INSTRUCTIONS

September 18, 1989

Dear Sir:

Re: Survey of Faculty at Colleges and Technical Institutes

My thanks to you and your institution for agreeing to distribute these questionnaires for this study.

I would ask that you distribute the questionnaires the week of October 2-6, 1989, to those employees classified as full-time faculty members at your institution. These may be faculty members in on-going positions or contract positions for the current academic year.

In distributing the questionnaire, I am requesting the following:

1. Please arbitrarily choose either the first, second or third name on a list of full-time faculty members. Then choose every third name thereafter on the remainder of the list.

2. Please record the names of the faculty members who are sent a questionnaire. I do not wish to know these names, but I would like you to distribute a follow-up letter which I will send to you in three or four weeks time.

3. Please advise me of the number of questionnaires that were actually distributed at your institution.

4. Please keep any surplus questionnaires until the follow-up letters are distributed in three or four weeks, just in case a respondent has misplaced the first copy. At that time I would appreciate the return of any surplus questionnaires and envelopes.

Please feel free to keep a copy of the questionnaire for your records. If you have any questions, please call my office at (403) 853-8512.

Thank you very much for distributing these questionnaires.

Sincerely,

Steve Pawlak

APPENDIX C: COVERING LETTER

October 2, 1989

Dear Faculty Member:

Re: Effects of Financial Constraint at Colleges and Technical Institutes in Western Canada

I am requesting your cooperation in a study of financial constraint, which is a concern at many colleges and technical institutes in Western Canada.

The purpose of the study is to assess the effects of financial constraint at colleges and technical institutes from the viewpoint of faculty, and to identify the relative acceptability of various measures to deal with financial constraint.

This study is being undertaken as part of my doctoral program at the University of Alberta, under the supervision of Dr. J.M. Small. Your institution has been most helpful in facilitating this research, but has not been involved in its initiation or its design. The results of this study will be provided to each institution that participates in the study.

You are requested to complete the enclosed questionnaire and return it in the stamped, self-addressed envelope provided for your convenience. The results of the study will be reported by college sector and institute sector in each province to assure anonymity of individual respondents and institutions.

Your views about financial constraint are important and I hope you take this opportunity to express them. Thank you in anticipation of your taking part in this study.

Sincerely,

Steve Pawlak

Encl.

APPENDIX D: FOLLOW-UP LETTER

October 19, 1989

Dear Sir:

Re: Survey of Faculty at Colleges and Technical Institutes

As mentioned in my letter of September 18, 1989, I would like to send a follow-up letter to the faculty who received a questionnaire for the above survey. The purposes of this follow-up letter are to thank those who have already completed and returned the questionnaire and to encourage those who have not already responded, to do so.

Please distribute these letters to the same faculty members who received the questionnaires for this survey. If a faculty member on the list requests another copy of the questionnaire, would you please supply it.

If you have not already informed me, I would like to know how many questionnaires were actually distributed at your institution. I would also appreciate receiving from you any unused questionnaires and envelopes.

If you have any questions or concerns, please call my office at (403) 853-8512. Thanks again for all your help.

Sincerely,

Steve Pawlak

APPENDIX E: LETTER OF APPRECIATION

APPENDIX F: SURVEY RESULTS COVERING LETTER

March 5, 1990

Re: Survey Results - Faculty Perceptions of Financial Constraint at Public Colleges and Technical Institutes

In October, 1989, a questionnaire was distributed, with your help, to one-third of the full-time faculty members in the colleges and technical institutes in Alberta, British Columbia, Manitoba and Saskatchewan. Overall, a response rate of about 50% was obtained.

The data was categorized into seven sectors:

Alberta Public Colleges
Alberta Technical Institutes
British Columbia Colleges
British Columbia Technical Institutes
Manitoba Public Colleges
Saskatchewan Public Colleges
Saskatchewan Technical Institutes

Please find enclosed a copy of the results for your sector and for the total sample. I have also enclosed a copy of the questionnaire, so you can make reference to it.

Please note that for Part III 'Means of Dealing With Financial Constraint', the items are listed in order of the "most acceptable" to the "least acceptable" means of dealing with financial constraint.

I hope this information will be useful to you and your institution.

I want to thank you very much for your assistance and the participation of your institution in this survey.

Sincerely,

Steve Pawlak

APPENDIX G:
THE CANADIAN ALL-ITEMS CONSUMER PRICE INDEX

THE CANADIAN ALL-ITEMS CONSUMER PRICE INDEX

Components	Weights of Components	
	1978	1974
Food	21.1	21.5
Housing	35.4	34.1
Clothing	9.6	10.1
Transportation	16.2	15.8
Health and Personal Care	3.7	4.0
Recreation, Reading and Education	8.6	8.3
Tobacco and Alcohol	5.4	6.2
TOTAL	**100.0**	**100.0**

These "weights" are based on some 400 goods and services that are bought by the average Canadian urban family. The weights are determined by a national Family Expenditure Survey conducted every four years by Statistics Canada.

APPENDIX H:
THE ONTARIO UNIVERSITY NON-SALARY PRICE INDEX

ONTARIO UNIVERSITY NON-SALARY PRICE INDEX

Source and Weighting Pattern of Component Indices

Component	Index Weight	Source
Books	7	Bowker (U.S.) Hardcover Book Price Index, converted for Canadian dollar fluctuations
Periodicals	7	Bowker (U.S.) Periodical Price Index, converted for Canadian dollar fluctuations
Equipment	10	U.S. Department of Commerce, Survey of Current Business. Price index for machinery and equipment, converted for Canadian dollar fluctuations
Computing	10	Research Associates of Washington. Higher Education Prices and Price Indexes: 1986 Update. Data processing hardware. Converted for Canadian dollar fluctuations
Furniture	2	Statistics Canada Industrial Product Price Index - Office Furniture Industries
Stationery and Paper	8	Statistics Canada Industrial Product Price Index - Paper and Allied Product Industries
Printing Materials	7	Statistics Canada Industrial Product Price Index - Fine Papers
Tools and Apparatus	8	Statistics Canada Industrial Product Price Index - Hardware, Tool and Cutlery Industries
Chemicals	4	Statistics Canada Industrial Product Price Index - Chemical & Chemical Products Industries
Postage	3	Statistics Canada Consumer Price Index - Postage
Long Distance	2	Statistics Canada Consumer Price Index - Communications

Component	Index Weight	Source
Electricity	9	Statistics Canada Industry Selling Price Index - Electric Power Selling Price Index (Non-Residential) over 5,000 KW - Ontario
Gas	7	Statistics Canada Consumer Price Index - Piped and Bottled Gas
Oil	1	Statistics Canada Industrial Product Price Index - Heavy Fuel
Telephone	4	Statistics Canada Consumer Price Index - Communications
Water	1	Statistics Canada Consumer Price Index - Water
Renovations	3	Statistics Canada Construction Building Material Price Index - Non-Residential
Transportation	3	Statistics Canada Consumer Price Index - Transportation
Shelter	1	Statistics Canada Consumer Price Index - Shelter
Food Away From Home	1	Statistics Canada Consumer Price Index - Food Purchased from Restaurants
Insurance	1	Statistics Canada Consumer Price Index - Homeowner's Insurance Premiums
Space Rental	1	Statistics Canada Consumer Price Index - Shelter